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PAPER TRADE JOURNAL

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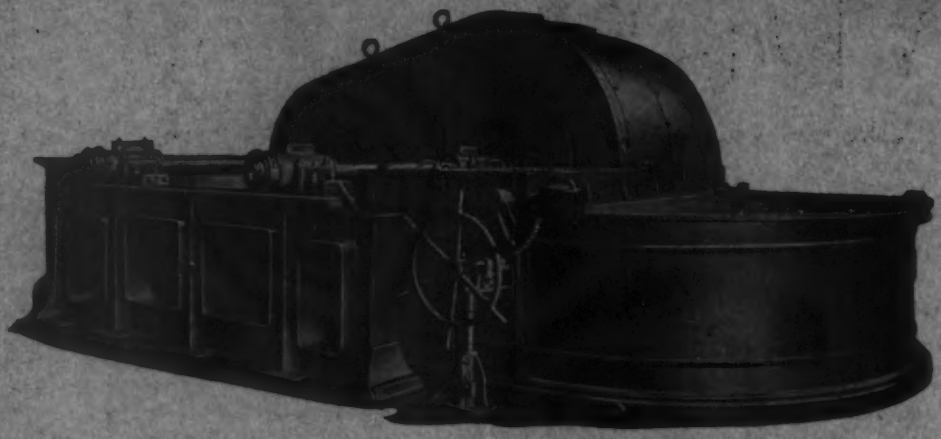

The following are a few of the results which have been determined by actual test:

Domestic Kraft pulp laps, 45% dry, fed into 1200 lb. pulper through chute from overhead, treated for beater and dumped within ten minutes. On thoroughly dry foreign Kraft, total time elapsed was 21 minutes.

On straight wood pulp furnish, 80% groundwood, 20% sulphite, a 1200 lb. engine thoroughly pulped the stock, ready for jordans, in 20 to 30 minutes.

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THE NOBLE & WOOD MACHINE CO., Hoosick Falls, N. Y.

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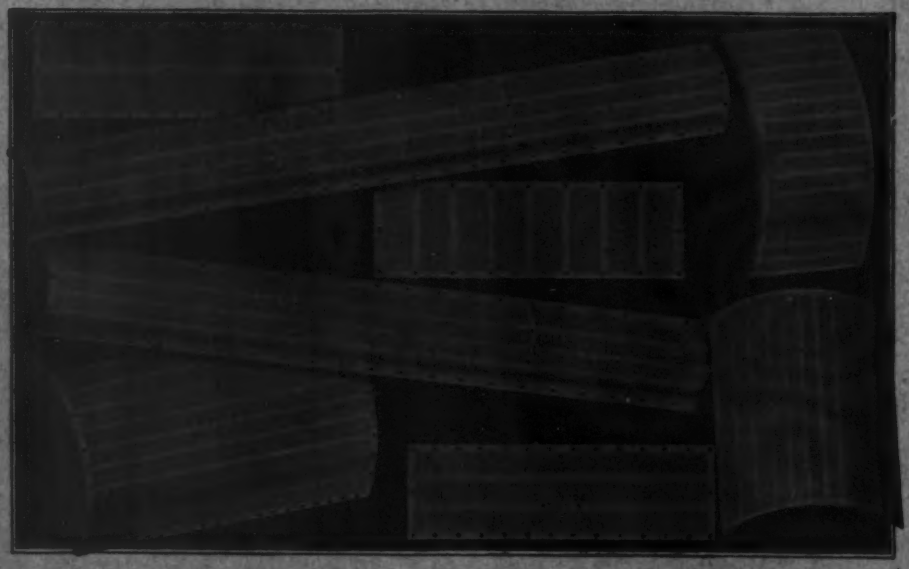

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With Which Is Combined

Vol. LXXXII, No. 18 — Thursday, May 6, 1926

The Magazine of the Paper Industry

National Wood Utilization Committee Meets

Paper and Pulp Industry Is Represented by a Sub-Committee Which Has Worked Out Projects Which It is Hoped Will Be Taken Up By the Permanent Organization—Meeting Is Called to Order By Sec. Hoover Who Tells About the Committee and What It Expects To Do

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 5, 1926.—The paper and pulp industry was represented at the meeting of the National Committee on Wood Utilization held here last week at the call of secretary of commerce, Hoover, by a sub-committee which worked out projects that it is hoped will be taken up by the permanent organization. Their program was adopted by the general conference.

Following are the members of the sub-committee on paper of the National Committee; Norman Wilson, president and Hugh P. Baker, secretary of the American Paper and Pulp Association; John E. Alexander, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; W. G. MacNaughton, Secretary of the Technical Association of the Paper and Pulp Industry; R. T. Houk, Meade Paper and Pulp Company, Dayton, Ohio; Reuben B. Robertson, Champion Fibre Company, Canton, N. C.; A. Hollingsworth Tilston & Hollingsworth Co., Boston; and E. W. Kiefer, Port Huron Sulphite & Paper Company, Port Huron, Mich.

Meeting Called to Order by Sec. Hoover

The meeting was called to order by Secretary Hoover, who is the permanent chairman of the National Committee. He spoke of the organization of the committee which is really an outgrowth of the reforestation conference which was called nearly two years ago by President Coolidge. Mr. Hoover called the attention of the committee to the fact that elimination of waste is all asset and no liability. He said also that some man, who who wished his name to remain unknown, had donated a sum of $50,000 to carry on the work of the organization for a period of two years. It is contemplated that various organizations and industries will be asked to donate special men to help work out the various problems for a period of a few months or perhaps a year. Following the talk of the Secretary the meeting broke up into various sections of which one was the paper and pulp group. Later these groups reported back to the general conference and their recommendations were adopted. Mr. Houk was chairman of the paper group and he reported back the following which was adopted by the conference;

Report from Pulp and Paper Industry

The sub-committee representing the paper and pulp industry wishes to make the following report and recommendations as to investigations and research affecting the more economical use of wood in the manufacture of pulp and paper:

Regional Surveys

I. That regional surveys be made of pulpwood resources in the different forest regions of the United States.

As both producers and consumers of wood are vitally interested today in question of available stands of timber and as the pulp and paper industry, is particularly concerned as to future supplies of pulpwood, this sub-committee feels that there is unusual opportunity for the National Committee to assist in a national survey or census that will indicate accurately the amount of timber and wood upon which the industries may depend.

With all of the excellent work which the United States Forest Service and various State Departments of Forestry have been doing in the way of surveys of forest resources, there is yet a definite lack of accurate information as to the pulpwood resources of the United States.

The Associations within the pulp and paper industry are attempting to meet the situation by the sending of a forester into the different paper making regions for field studies and reports. The Lake States have been covered and the forester is now in North Caroline, Virginia and West Virginia for similar studies.

The sub-committee feels that the National Committee can be of great service in coordinating efforts along this line now being made by Federal and State agencies and the industries. It should be possible to so coordinate efforts as to reduce the expense of forest services now under way or projected.

New and Seldom Used Woods

II. New and seldom used woods and processes for their reduction to pulp.

With the pulp and paper industry facing an increasing scarcity of soft woods such as spruce and hemlock, there is very definite need for a thorough study of the use of woods which have not been generally used in the past or entirely new woods. The Forest Products Laboratory at Madison has made very helpful studies along this line but there is great need for exhaustive research.

The sub-committee feels that this is a question which concerns not only the pulp and paper industry but the lumber industry and wood using industries in that such a study might well make available for use certain woods which cannot now be taken out at a profit by the lumbermen. Therefore, we recommend that the National Committee assist in bringing the various wood using industries together for a carefully coordinated study of this problem.

Coordination of Lumber and Pulp Mills

III. Coordination of lumber and pulp mills.

The saving of wood waste, which is probably the most important phase of better wood utilization, is a question of great importance in the paper industry today. The great quantities of waste from saw mills now being burned either for fuel or

(*Continued on page 70*)

Forest Service and Pulp and Paper Men Meet

Closer Cooperation Is Keynote at Second Annual Conference Held in Washington Last Week —Meeting is Addressed by Secretary of Agriculture Jardine and Numerous Representatives of the Pulp and Paper Industry and the Forest Service

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., MAY 5, 1926—Closer cooperation between the paper industry and the Forest Service was the direct outcome of the second annual conference held here last week between officials of the Department of Agriculture and the Advisory Committee of the Pulp and Paper Industry to the Department of Agriculture.

"I need hardly remind you," said Secretary of Agriculture Jardine, addressing the committee following the luncheon given by the American Paper and Pulp Association, "that the raw material problem of the pulp and paper industry is perhaps more acute than that of any of the other wood using industries. It is gratifying that your industry is concerning itself so seriously with this problem in all its phases, including that of timber growing and timber saving. This conference itself is one more token of that concern."

Conference Well Attended

The conference lasted for an entire day, and was well attended by the paper committee as well as officials of the Forest Service, including Colonel Greeley, the Chief Forester and a number of others. George W. Ostrander, of Finch, Pruyn & Co., a member of the committee acted as chairman of the conference, with Dr. Hugh P. Baker as secretary.

In addition to the Secretary of Agriculture and Colonel Greeley, others who spoke included Dr. Baker on "What is there for the Paper Industry in the Practice of Forestry;" A. C. Goodyear of the Bogalusa Paper Company, on "Insuring the Pulp Mill a Permanent Supply of Wood Best Adapted to the Mill's Needs;" R. B. Robertson, of the Champion Fibre Company, on "Organizing for Forest Management;" Mr. Ostrander on "Costs of Specific Operations in Practical Forest Management;" F. E. Bragg, of the Orono Pulp and Paper Company, on "Rail Haul versus Floating Rafts, Flumes, etc;" W. G. MacNaughton of the Technical Association of the Paper and Pulp Industry, on "Stream Purification;" and N. C. Head, of the International Paper Company on "Reforestation, Natural and Artificial." Officials of the Forest Service who spoke included in addition to Colonel Greeley: Paul G. Redington on "Law;" Fred R. Fairchild on "The Forest Taxation Investigation;" E. N. Munns, on "Silviculture Research;" C. P. Winslow and John D. Rue on "Forest Products Research;" C. W. Boyce, on "Forest Economic Investigations" and a number of others.

Personnel of the Committee

The personnel of the Advisory Committee of the Industry includes the following: D. C. Everest, Marathon Paper Company, Rothschild, Wis.; George W. Sisson, Jr., Racquette River Paper Company, Potsdam, N. Y.; George W. Ostrander, Finch, Pruyn & Co., Glens Falls, N. Y.; H. E. Fletcher, Fletcher Paper Company, Alpena, Mich.; F. E. Bragg, Orono Pulp and Paper Company, Bangor, Me.; N. C. Head, International Paper Company, New York City; Grellet Collins, Dill & Collins Paper Company, Philadelphia; Reuben B. Robertson, Champion Fibre Company, Canton, N. C.; A. C. Goodyear, Bogalusa Paper Company, Buffalo; Charles Luke, West Virginia Pulp and Paper Company, New York City; and Dr. Hugh P. Baker of the Association. R. T. Houk, of the Meade Pulp and Paper Company, Dayton, Ohio, also attended the meeting.

Secretary Jardine Speaks

Secretary of Agriculture, Jardine, in his talk said:

"The Advisory Committee of the Pulp and Paper Industry to the Department of Agriculture was originally created by my predecessor, the late Secretary Wallace. Its object is to discuss timber-growing and timber utilization problems in which the industry and the Department have a joint interest. Such discussions are good in themselves; but they are doubly good when they lead to action. I hope the relations of this Committee and the Department will be such as to help you in your raw material problem. I feel sure that your advice will be helpful in our research, in our forestry education work, and in our program for carrying out the Clarke-McNary law.

"There is a great deal of talk nowadays about industrial forestry. The signs are encouraging. Large companies here and there are reorganizing their holdings on the basis of timber growing and continuous operation. Other companies are investigating the subject. We are undoubtedly making progress.

"The Department of Agriculture is anxious to get more and more of this talk precipitated into action on actual jobs in the woods. It is anxious to have the forest-based industries come more closely to grips with the problem of their raw material. In this attitude the Department is of course thinking primarily of the public need. Your industry is one of the key industries; you have created a commodity without which the intricate modern world could not function.

Problem of Pulp Industry Acute

"I need hardly remind you that the raw material problem of the pulp and paper industry is perhaps more acute than that of any of the other wood using industries. It is gratifying that your industry is concerning itself so seriously with this problem in all its phases, including that of timber growing and timber saving. This conference itself is one more token of that concern.

"There has been in the past a vast amount of talk—I think a disproportionate amount of talk—on the *costs of timber growing*. It would hit nearer the truth and be better psychology if we investigated more and talked more of the savings of timber growing. I am not thinking merely of savings in the public interest, but of industrial savings as well.

"One important saving brought about by timber growing will be maintaining value in cut-over lands. I need not tell you that cut-over land has become a drug on the market. There are scores of millions of acres of it that will never be used for farming; there are other millions that may some time be used for farming but not soon enough to prevent growing one or more crops of timber on it. Indeed it is probable that our present forest area of about 470 million acres (which includes cut-over and denuded lands not used for farming) will remain constant or it may possibly even increase in the next few decades.

"This vast acreage constitutes about one-fourth of the total area of the United States. The public advantages of growing successive timber crops on this land are apparent. Using this land in an organized productive way would give healthful employment for hundreds of thousands of people and would yield no mean increase in our national wealth.

Obvious Public Savings

"These are obvious public savings. But they are likewise industrial savings that may warrant timber growing as an enterprise for the land owner.

"In the first place let me say that during the last few years the Department, through the Forest Service, has been studying the

practical measure necessary to keep forest lands productive. It has studied them in every forest region of the United States. We are just now printing the first of these studies—that on "Logging and Timber Growing in the California Pine Region." These studies are going to remove a good deal of the mystery associated with the word *forestry*. They show that timber growing is a less formidable and complex thing than most people supposed. Good protection against fires, including special precautions with slash, seed trees, the saving of advance growth from destruction—these are the main measures to assure a second crop. It may not be a full crop, or the most valuable crop, but it will be a crop worth logging.

"We all know about the costs and the obstacles to carrying these things out. But what of the positive, constructive side of the picture? These measures will give value to cut-over land. The growth of industrial forestry will, in my opinion, create a positive demand for land well-stocked with young forests. And besides, of course, the State and Federal Governments are likely to buy a good deal of this sort of land in the next few decades. Denuded land on the other hand will likely decrease in value as speculative farm colonization decreases.

The Owner of the Land

"But what of the owner who holds this land? He can hold it bare or he can hold it stocked. If he holds it bare and lets fire keep it bare, it grows nothing but taxes. But if he has cut his original timber in such a way as to let the land restock naturally, the soil and the sunlight—makers of wood—will work for him with the ceaseless vigor of nature.

"If the timber owner is also a timber manufacturer, continuous timber growing will save him from amortizing his plant-investment. If the owner will figure the amount of this saving, he will find it a very material sum to offset against the cost of restocking and protecting his land. And in addition to material investment there is the large intangible investment of trained personnel and perfected organization which are so costly to scrap either from the industrial or the social standpoint.

"Timber growing means permanency of industry and this permanency gives opportunity for working out a coordination of manufacturing plants that will use the forest crop without waste. The one-factory type of forest utilization is as bad in the long run as the one crop type of farming; they both result in the long run in soil depletion. One long step in the direction of diversified forest utilization will be to find ways and means to use for paper-pulp some of the millions of tons of wood now wasted as small or cull logs, limbwood, and sawmill trimmings. The utilization of this waste will not only prolong our timber supply, but it will make timber growing much more profitable because it will use the timber crop much more completely.

Forest Industries Uniquely Equipped

"Our large scale forest industries are uniquely equipped to undertake timber growing. Many of them have large reserves of old timber that will tide them over until the young crop matures. In your own particular field, you have the advantages of being able to use timber that grows to pulp size in a comparatively short time. A large company or corporation ordinarily looks forward to a very long life which fits it for the forestry enterprise. It has stability and a long look ahead. It usually has financial resources not only to maintain itself but to build up its plant and to reach out for raw materials. It can command men of vision and creative intelligence.

"The project of forest rehabilitation has the largeness and the romance that our great projects of railroad construction had a half century ago. And because it is in the highest sense a constructive enterprise it will command financial support of the American people. As a stable, long-term investment, founded on the splendid security of soil productivity, I venture to predict that rehabilitation of our depleted forest lands will become a more and more attractive outlet for our surplus capital. Why seek foreign enterprises when nearly a fourth of our land threatens to go to waste for lack of constructive handling? Here is a challenge to our financial genius. Pioneers are already breaking the way. It is a field that should appeal to leaders of forest industries who want to build their house on a rock instead of sand."

Stream Purification

W. G. MacNaughton, secretary of the Technical Association of the Pulp and Paper Industry presented the following statement to the committee on stream purification:

"The growing sentiment in favor of stream purification must be recognized as a phase of the general improvement of living conditions. It is but the application of what is recognized as good housekeeping practice to the country at large.

"In many, perhaps most industries, the result of the pressure in favor of stream purification is also favorable to them financially. In some industries, however, there are forms of waste customarily discharged into the streams and which have an injurious effect on them that require study for disposal otherwise.

"In the pulp and paper industry a considerable part of the waste has been profitable of recovery by the simple means of screening the effluent and using the clarified water again. By this means the volume of the final effluent is materially reduced. Much of the stream pollution charged to paper mills is in this form and many of the more progressive mills have greatly reduced the cost of manufacture by preventing this waste of their primary raw material in the form of fibre.

"In the industry, however, there are three classes of plants on which the stream purification program bears very heavily since there is no known method of disposing of their waste besides discharging it into the streams except with great expense. These are the strawboard mills, those that treat printed paper to remove the ink and recover the paper pulp, and the sulphite wood pulp mills.

Strawboard Mills

Without going into the details of the present manufacture it is the opinion of many chemists who *have* studied the problem that the most logical way to preserve their industry and at the same time avoid stream pollution, may be to apply a different process for digesting the straw from that in use since the earliest times.

Deinking Plants

In regard to the ink removal from printed papers for reuse of the pulp, there is also a very difficult problem if the mills should be forced at once to observe the regulations in regard to stream purification. Without burdening you with the details of the problem it is my opinion that the real solution, difficult as it may be of application, is to develop a printers' ink of a composition that is more readily removable than the oil-carbon ink now used.

Sulphite Mills

The sulphite mills have been found to be one of the most serious offenders against stream purification. On account of the fact that the waste liquor has an extremely high oxygen demand when it is discharged into streams of small volume, the result may be very harmful to the fish life.

The sulphite pulp production of United States is now about 1,500,000 tons per year and is the most important raw material for all grades of paper. The volume of the waste which constitutes the polluting element is also worth consideration. This amounts to wood substance approximately equal to the pulp produced, 1,500,000 tons per year or 5,000 tons per day, as well as the sulphur and lime used for the digestion.

The most likely immediate solution of the problem from a stream purification standpoint appears to be the evaporation of the waste liquor and burning the residue for steam generation.

These are some of the problems which the paper industry must solve if the present tendency of state legislation is continued,

and on which the Forest Products Laboratory is assisting very materially.

Mr. Goodyear's Statement

Mr. Goodyear's paper was as follows:

The necessity of providing for a permanent supply of wood was not so apparent in the earlier days of the industry when seemingly exhaustless areas of forests were available. As a result many mills made no adequate provision and find themselves today unable to compete with mills owning their own forests. That wood fibre will remain the principal material from which pulp and paper are made is highly probable, notwithstanding the fact that the fibres of other plants, such as certain grasses and bamboos have been used successfully in paper manufacture on a large scale.

The large increase in mill construction in Canada and the Southern States is due almost entirely to the timber supply in those regions. As the writer is much more familiar with conditions in the South than any other region, what I have to say will apply particularly to that part of the country. Except for redwood in California, there is no timber in this country that reproduces itself as rapidly as Southern pine. It grows readily upon land unsuited for agriculture which can be acquired in large blocks at a low price. It can be planted and fenced at a cost of about $4.00 per acre. By proper management before the standing timber is removed, by leaving seed trees, the forest will reproduce itself.

Fire the Worst Enemy

The worst enemies of the new growth are fire and hogs. Fences will keep the hogs out but to prevent fires means constant watchfulness and the backing of the community in which the forest is located. The South is a rapidly developing section of the United States and the tax problem for timber land holders has become a most important one. It is only possible to grow pine trees when they are taxed as a crop. Louisiana was the first Southern state to recognize this situation and by the enactment of two laws exempting growing forests from taxation for a period up to forty (40) years, the state has taken the first place in the solving of the forest problem.

In Louisiana it is still possible to acquire lands suitable for growing timber at a low price. Once the lands are acquired a contract can be made with the state fixing the value on the lands for tax purposes for a period sufficient for that land to produce a commercial forest. This business-like policy combined with low power costs and other advantages, have brought a greatly increased paper production to Louisiana. In fact, the expansion has been more rapid than general conditions have justified and the result has been an over-production or at least an over-capacity. However, the paper industry has undoubtedly come to the South to stay and will probably be enlarged there more than in any other part of the country.

Experiences in Sweden and Norway

In managing a Southern forest, the mill owner can get valuable information from the experience and practice of operators in Norway, Sweden and Finland. In none of these countries do the forests reproduce themselves nearly as rapidly as they are reproduced in our Southern states. It probably takes at least twice as long for a tree to come to maturity in these countries as it does in the yellow pine lands. Practically none of the Scandinavian mills own forest limits sufficient in extent to meet all of their requirements. They have not found this necessary or desirable. What they have done is to acquire enough forest land to continually supply a large percentage of their requirements so that they will never be at the mercy of the forest land owner who has logs and wood to sell. On the other hand, by providing a constant market for the independent owner of forest lands, a constant local interest in reforestation is maintained and the difficulties incident to protecting the growing forest largely overcome thereby. This is a most important lesson for American operators. The local farmer must be encouraged to grow his timber as a crop. When he is, he will be found supporting proper tax legislation, he will do everything possible to keep out forest fires and he will turn in with a will to put out forest fires when they have started. In forest regeneration the Southern farmer can make or mar.

Fuel Utilization

The second lesson to be learned from the Scandinavian operator is full utilization. Practically every pulp mill in Norway, Sweden and Finland is operated in conjunction with a sawmill. Very few American mills are operated in this way, but undoubtedly their number will increase as time goes on. The young Swedish forest at the time of the first thinning stands so thick on the ground as to be perfectly impassible. To provide space for future growth the weakest of the young trees are removed, they are not wasted, they are used for charcoal. At the next thinning there will be more charcoal wood cut out, and perhaps the first pulpwood, but in each thinning, it is the best trees that are left standing and the poorer trees only that are removed.

As time goes on in successive thinnings, except for the limbs and tops, charcoal wood disappears, and a little later the first logs suitable for lumber are taken out. In all cases, however, the trees are put to their best use and when the final cutting comes, practically all of the trees are converted into lumber. Unquestionably this is the most economical plan of handling the forest. At the same time, it solves the lumber problem and helps carry the cost of growing the timber crop. There are still many Southern lumber manufacturers who laugh at the possibility of growing timber for lumber, yet several Southern mills are today bringing logs by vessel from the Pacific Coast to cut into lumber for Southern and Mid-western markets. The time has surely come when under proper tax legislation trees can and will be grown for lumber and as that situation develops and Southern forest lands are given proper care and management, it will almost certainly prove that at a comparatively small expense, the Southern mill can protect its future timber supply at very little cost. The essentials are proper legislation, fire and hog protection, local support and co-operation with other forest industries.

Industrial Forestry

Colonel Greeley said:

As the Committee knows, the Department is interested not only in public forestry but in private forestry. It is interested not only in helping to remove genuine economic obstacles to industrial forestry, but also in encouraging a more positive, constructive attitude toward industrial forestry among timberland owners and the forest-based industries.

The Government's activity in managing the National Forests and in buying more forest land is a standing challenge to private interests to make a larger showing in industrial forestry than they have so far made. Consider the Government's program of buying forest land. It has already bought about 2,690,000 acres of forest land in the eastern United States. For the coming fiscal year the purchase appropriation is $1,000,000. The McNary-Woodruff bill, now before Congress, provides a continuing, expanding purchase program, with an annual appropriation of $3,000,000 a year for five years and $5,000,000 a year for five years.

As now roughly formulated, the Government program for additional purchases of forest land for the next 10 years (contingent upon appropriations, of course), is as follows:

2,500,00 acres in the Lake States
500,000 acres in the Northeast
3,000,000 acres in the Appalachians
2,500,000 acres in the South

The new National Forests will, of course, be primarily for timber-growing, but they will also be helpful as demonstrations of timber-growing and forest protection.

This program is of the utmost importance to the forest-based industries because it foreshadows a fairly large scale attack on the public ownership side of the forest problem.

A common sense, low cost, automatic pulp saver and white water filter that returns the fibre for immediate use and puts the white water in shape for continuous re-use.
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The pulp and paper industry, by reason of its comparative immobility, has a particular interest in the public program of timber-growing as one means of assuring pulpwood. The association, through its regional membership, can substantially assist the program by bringing to our attention particularly suitable purchase units and helping to get prospective sellers and the local public into a sympathetic attitude. For every acre of forest land that shall be bought and put under management by the Government in the next ten years, two or three acres ought to be put under management by private owners. These public forest ought to form the nucleus of *organized efforts* for forest management by owners and industries.

The Department has been trying to help the industrial forestry movement in other ways. The Forest Service will soon complete the regional studies of "Logging Practice and Timber Growing." These studies have been made to determine the specific causes of forest destruction and the measures of fire protection and the modifications in logging practice needed, as a first objective, to keep forest lands growing at least fair crops of timber and as a second and higher objective to get from them full timber crops. These measures are based on extensive field studies. They do not pretend to any finality, but they do afford a beginning for private timber-growing. The measures they advocate are probably on the whole much simpler than the things the average man thinks of as "forestry" and they should do much to dispel some of the mistaken ideas of mystery and complexity associated with that art.

In the opinion of the Department the time is ripe to go a step further and make detailed expert investigations in the financial pros and cons of industrial forestry. The question of what can and cannot be economically done in the better handling of timberlands is too grave a one to be settled by offhand judgments. Like the chemistry of paper making, like the engineering of water power projects, like the floating of a bond issue, it is a question that can be settled only by hard, stubborn, realistic grubbing for facts by men who are trained to see and to weigh facts. The pulp and paper industry because of the shortage of raw materials in the region in which it is chiefly concentrated has every incentive to go out into the woods and there study this basic and vitally important problem of growing pulpwood as one possible solution of its own raw material problem. Such a study will moreover convince the public that timberland owners are consulting the facts and will keep timber owners thinking of timber-growing in positive and constructive terms. In view of the tangible public aid being given to timber owners and timber industries through the Clarke-McNary law and through public timber-growing, it would seem logical and fair for the industries to make such investigations as the following:

Costs of growing pulpwood as an industrial enterprise and the other economic factors concerned.

Census of forestry enterprises already under way by pulp and paper companies, including costs, carrying charges, and returns.

Regional surveys of pulpwood resources and regional studies of possible yields under forest management.

Possibilities of supplementing Federal acquisition of forest lands by putting industrial forest holdings under "Sustained yields" forest management.

If such investigations were undertaken, the association might act as a clearing house, collecting funds and employing men. Certain kinds of service rendered might be paid for by individual owners, others by regional groups of owners, and still others by the whole association. It is obvious that forestry investigations involving important financial decisions should be in the hands of foresters of experience and mature judgment.

The Forest Service hopes to undertake country-wide investigations of costs and returns of timber-growing when it is financially able to do so. In the meanwhile considerations of good business justify the industry going ahead on its own initiative to get the straight facts on the problem of raw material.

Fire Cooperation Under the Clarke-McNary Law

The Federal Government will spend during the fiscal year beginning July 1, 1926, about $680,000 cooperating with the States and, through them, with forest owners, in protecting forests against fire. Ultimately under this law the Government will spend $2,500,000 a year in fire cooperation. As a guiding principle, the Government will put up roughly a fourth of the cost, the State another fourth, and the owners half. The Government will expect the State protective system to be efficient, to be assured of permanency, and to cover not only timberland but cut-over and burned land, for the Government is interested in fire protection primarily *as a means of assuring continuous crops of timber*. Under this law the Forest Service is cooperating in fire protection with 31 of our 39 timbered States. In addition, we are making a cooperative investigation, as required in the Act, of the protective measures necessary in each State to keep the forest land productive.

This fire cooperation provision of the Clarke-McNary law is the response of the public to the insistent demand of timberland owners that the public pay a fair share of the cost of reforestation. In the first and most important step in reforesting private lands, namely, fire protection, the Federal and State Governments plan to assume half the burden as rapidly as appropriations are provided. This response of the public has been met by a hearty response in many States by timber owners and associations, who have helped greatly in working out first-rate forest protection systems. But there is room in other States for a much better response, and in those States cooperative forestry is on trial. It will be tested by the speed and effectiveness with which these three agencies unite to put down the fire evil and thus create the security so essential to timber-growing.

What can timber owners and associations do in carrying out their side of the job? (a) They can, where not already doing so, contribute their share to the protection fund. (b) They can help perfect local, State, and regional fire protection associations, whose primary purpose will be fire control but which can become strong influences in forwarding timber-growing. (c) They can help public agencies to work out, by study and experiment, the details of the protection system—a job of great difficulty and complexity. (d) They can assist in framing and passing State fire protection laws. (e) They can assist in leading public sentiment for fire prevention and law observance and in encouraging adequate State laws and appropriations.

Forest fire control cannot be assured merely by legislation and appropriations. The public officials in charge must be supported, or speeded up, or if need be challenged, and at all stages actively helped by the local people. Timber owners in particular can help by organizing for concerted action.

The relation of this committee to the problem might take the form of inducing interested pulpwood owners in different States to take an active hand in organizing timber owners' associations to carry out the above objects. This association, representing as it does, large aggregate holdings, is in a good position to exert leadership in organizing timber owners and making them most useful in carrying out the Clarke-McNary law.

Promoting Farm Forestry

Two other provisions of the Clarke-McNary law deserve brief mention: the authorization to furnish forest nursery stock to farmers (for which $75,000 will be available for 1926-7), and to demonstrate to them methods of improving and renewing woodlots (for which $50,000 will be available). This latter work will be largely done through the State extension services and State foresters.

Considering that one-third of our forest area is in farm woodlots, mostly in the eastern United States, it is obvious that the farmer will be an important member in the timber-growing partnership. The pulp and paper industry could well afford to give a good deal of thought to encouraging farmers to grow

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Bodies for the G-BOY—and for Graham Brothers complete line of Trucks and Motor Coaches—are built in Graham Brothers own factory at Evansville, Ind. —the most modern plant of its kind in America. Whatever your requirements may be, a suitable body is immediately available at an attractive price.

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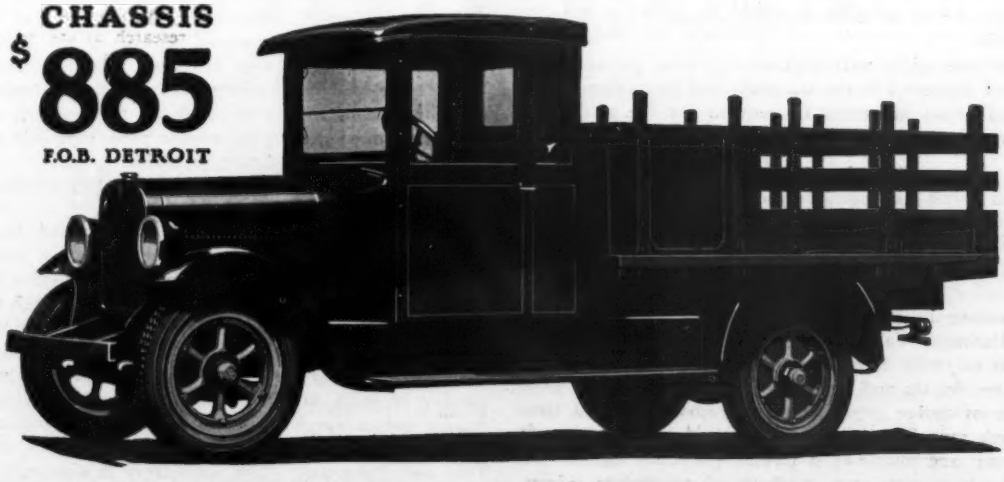

SOLD BY DODGE BROTHERS DEALERS EVERYWHERE

pulpwood and to fit farm forestry into the scheme of public and industrial reforestation. Large company nurseries might sell planting stock to farmers at a low profit, for example. Companies with foresters might hold field days to demonstrate to farmers how to make their wood lots permanent and profitable A small amount of educational work by the association and by individual owners might go a long way toward mobilizing the immense productivity of our farm wood lots for pulpwood growing. It could be likened to the activities of railroads in promoting settlement, farming, manufacturing, and the like in order to increase freight tonnage.

Tax Study Under Clarke-McNary Law

Clarke-McNary law attacks two chief obstacles to private timber-growing, the fire menace and uncertain forest taxation. Under this Act the Forest Service has started an investigation of forest taxation to determine in different regions how the present tax system affects timberlands and local community revenues and how various proposed forest tax reforms will affect them. This investigation will ultimately cover all the chief forest regions. The investigators will make an intensive study, in typical localities, of tax records, timber and land values comparative tax burdens of different kinds of property, sources of tax revenue, and the like, and will seek the help of officials, land owners, and others. When this investigation is completed, we want to be in a position to help work out, in each timbered State, a tax law that will be fair to everybody.

The Act also provides for investigating and promoting practical methods of insuring standing timber or growing forests from losses by fire and other causes, a phase of the study that will be worked out later. Timber insurance is necessary to protect the individual owner from the irreducible minimum of fires that will occur even with the best protective system.

As with all other features of the Clarke-McNary law, the tax study section provides for cooperation with public and private agencies. The Department hopes that timber owners particularly will assist in carrying out this project.

They can help the investigators collect records of taxes paid, timber estimates and maps, timber growth figures, records of cuttings and of land sales, purchases, or delinquishments for taxes, land and stumpage values, data on methods and costs of reforestation, etc. They can further help by advising on plans for the work, and later by helping to work out the results of the study into practical forest tax systems. They can help also by creating an intelligent local interest in the forest tax problem among local tax officials and citizens, for the tax problem cannot be solved merely by legislation, there must be a general public change of view on the forest as a source of wealth and of public revenue.

This committee might well undertake to keep the association informed and interested in the tax study and from time to time use its good offices in getting cooperation for the study from local timber owners, officials, and others.

Silvicultural Research

A Federal forest experiment station has been established in each of the following forest regions: Northeast, Lake States, Southern Appalachians, Southern, Northern Rocky Mountains, Pacific Northwest, Central Rocky Mountains, and the Southwest. A station is now being organized in California. Legislation is pending to establish stations in Pennsylvania and in the Ohio-Mississippi Valley region.

These stations, with staff of foresters supplemented in some cases by entomologists and pathologists, are studying such problems as rate of timber growth, logging methods that will spare young growth and permit natural reproduction, slash disposal, thinning young and middle-aged forests, protection against fire, insects, fungous diseases, etc., methods of establishing plantations.

The Northeastern Station, which covers New England and New York, the heart of the pulp and paper industry, is devoting 95 per cent of its efforts to those forests of chief interest to this industry—the spruce and fir. It is just completing an extensive study of the growth and yield of spruce, which will tell landowners what crops they can expect on different qualities of land at various ages of the timber. It has conducted a detailed investigation of cut-over spruce lands and has made the important discovery that, to get a good second crop of spruce without planting, the "advance growth" of spruce (i.e., the young trees that grew up under the old forest) must be saved from destruction by logging. These are samples of work that is of immediate concern to the landowner.

The Southern Station has made a very complete study of the growth and yield of the southern pines, and is making a regional study of the effects of fire on the forest and of different logging methods on the starting of a second crop.

In the Lake States, a growth and yield study of jack pine has been made, as well as other studies of particular interest to pulp timber owners, such as the handling of aspen-birch forests, the analysis of forest fire statistics, prediction of forest fire weather, etc.

These projects are typical examples of experiment station investigations that cover many phases of the regeneration, protection, and management of forests from youth to maturity. These stations are pioneers blazing the way for industrial timber-growing. The knowledge of forest management they are getting will result in larger and better crops of timber in both public and private forests.

The larger stations have Advisory Councils, representing various groups interested in forestry. The pulp and paper industry is well represented on these councils. It is the function of the councils to help the stations concentrate their work on the most urgent projects, to coordinate the work of different forest research agencies, and to encourage interested groups to support forest research.

The pulp and paper representatives on these councils could perform a useful service by keeping the committee and the association informed of experiment station projects of interest to the industry and in which the industry might want to help In turn it would be helpful if owners of pulp timberlands through this committee would keep the stations informed of the chief questions they encounter in the handling of their timberlands for a second crop. As time goes on different forest management methods will have to be tested out on a fairly large scale—a field for useful cooperation between land owners and the experiment stations.

Forest Products Research and Extension

The committee is familiar with the Department's program for better utilization of timber as an essential part of the forestry program. From many years of research at the Forest Products Laboratory the Department has much valuable information that ought to be used more widely. It is hardly reasonable to expect the Government to pay the bulk of the cost not only of the research but of getting the results used, especially as these results are often immediately profitable.

The following are examples of Laboratory results of interest to this committee:

It is estimated that a aloss of $1 to $1.50 is suffered for each cord of pulpwood stored more than a year. Although most mills aim to keep a year's supply on hand, circumstances often force longer storage and the loss by decay is very large. Much of this loss is preventable. A careful study of storage conditions, methods of piling, proper rotation in use, and wood yard sanitation has been carried on by the Laboratory, in cooperation with a large number of mills, and has resulted in methods which will materially reduce decay. The results have been published in Department of Agriculture Bulletin 1298, "Control of Decay in Pulp and Pulpwood." The Laboratory is also in a position to offer advice for particular conditions.

Preservation of Groundwood Pulp

The deterioration of groundwood pulp during storage is considerable. Because of the great power needed to produce this

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Pulp Shipments

Are your First-Open-Water shipments delayed? We can help you in such an emergency. Our pulp resources are at your disposal and we can take care of you from large shipments in transit and regular deliveries from open European ports.

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material, it is made in large quantities during high water and stored. Storage conditions are not favorable at best, for the pulp contains about 70 per cent of moisture, and besides must usually be stored in the open. Moreover, pulping does not destroy wood-consuming organisms originally present in the wood. Both storage conditions and the treatment of the pulp with preservatives have been studied, and the results summarized in U. S. D. A. Bulletin 1298. Of a large number of preservatives, a limited number have been found practical from a financial and protective point of view. Since the publication of the bulletin other preservatives have been found to be suitable. Protection is possible at as low as $1.75 per ton of pulp. Practically all the results of this work are now available in published form. Many mills are interested and much practical information is at hand. Where necessary the Laboratory can give special advice based on experience under manufacturing conditions.

White Water Studies

Tremendous quantities of paper-making materials are lost through the white water from paper mills. The Laboratory has cooperated with the Waste Committee of the Technical Association of the Pulp and Paper Industry and has compiled an immense amount of data regarding these losses and means of preventing them. It has assisted in installing and studying a number of successful white water recovery systems. The results of this study have been reported from time to time in the Papers of the Technical Association, in trade journal articles, and in Laboratory reports. In addition the Laboratory has much unpublished information.

Application of Sulphite Pulp Studies to Pulp Mill Operation

A study of sulphite pulps as influenced by variations in cooking has been carried by the Laboratory to a point where successful commercial application can be made. As a result of this work more definite control of the process is possible and the quality of product can be varied at will. The conclusions have been repeatedly verified under actual mill conditions and the Laboratory is now in a position to render assistance on problems arising in this process.

The results of this work have been reported in a series of articles in trade journals and in the papers of the Technical Association of the Pulp and Paper Industry. These reports are available from the Laboratory.

Because of the specialized character of this information, it has been best applied by direct contact with the mills. Each case calls for special treament—sometimes by correspondence; sometimes by personal inspection by a member of the Laboratory; sometimes by mill representatives visiting the Laboratory.

The Department would like to enlist the further aid of the association and the industry in getting such results as these into effect. No doubt the most effective way would be to employ specialists who would study processes already worked out and then demonstrate them at the mills. Also, through the activity of this committee, executives and chemists of plants might be led to take a greater personal interest in these and other Laboratory findings, not only by correspondence and reading, but by study at the Forest Products Laboratory.

What Forest Products Laboratory Can Do

John I. Rue of the Forest Products Laboratory, Madison Wis., presented the following statement in what the Forest Products Laboratory can contribute to the industry with the aid of the advisory committee:—

Research at the Forest Products Laboratory on the following subjects of vital interest to the pulp and paper industry has reached the stage of development where contact with the mills is desirable either to effect direct application or to carry the results from the semi-commercial to the full commercial scale.

I. Improved Methods of Operation and Control of the Sulphite Process to Obtain Higher Yields and Better and More Uniform Quality of Products.

In the cooking of wood by the sulphite process, temperature schedules and acid requirements have been worked out for spruce which give yields of 48 to 50 per cent of oven dry pulp calculated on the basis of oven dry wood. This is an increase of at least 10 per cent in the amount of pulp obtained by many mills. Temperature schedules and acid requirements favorable for the production of pulps of specific properties have also been developed. Similar results have been obtained on other sulphite pulpwood species.

The available information has been published but successful application frequently requires adaptation to local mill conditions. Such demonstration can best be made by the Laboratory staff at the mills.

At least three mills are operating on the principles advocated by the Laboratory and claim distinct economic advantage in doing so.

II. Pulping Hardwood by the Sulphite Process.

The Laboratory has proved the practicability, on a semi-commercial scale, of pulping birch, maple, and aspen (investigations are still in progress which will include the gums) by the standard sulphite process, the pulps to be bleached and used in papers not requiring maximum strength. The Laboratory is ready to demonstrate in the mills the method of operating the process and the quality of product obtainable.

The most recent results will be released for publication in three or four months.

III. Hardwoods for Low and Medium Grade Print Papers

The so-called "semi-chemical" process has been developed by which birch, aspen, and the gums can be pulped with yields in excess of 70 per cent and to a product sufficiently white to be used in low grade print papers without bleaching. It is probable that cottonwood and willow and possibly maple and other species can be included in the list after further investigation. Available data indicate that it will be to the economic advantage of some news print mills to supplement their spruce wood supply in this manner and that the establishment of new mills may be advisable in localities favored by low cost wood.

It is possible that the semi-chemical product may find application to a limited extent in medium grade book papers not requiring maximum whiteness and durability.

The investigative results are now in process of preparation for publication to be released within two or three months.

IV. Hardwood Mill and Logging Waste for Boards

The "semi-chemical" process in one of its several modifications, can be applied to the pulping of hardwood mill and logging waste. The product possesses stiffness and flexibility valuable in test container boards, and may be used to supplement the combination of old papers and kraft.

The investigative results are in process of preparation for publication to be released within two or three months.

V. Semi-Kraft From Pine Mill and Logging Waste for Container Boards

The sulphite process can readily be modified to soften pine chips uniformly to yields of 60 to 70 per cent. Methods of grinding have recently been developed that economically reduce the softened chips to pulp. The extent to which such products can be economically applied will depend upon the properties and cost of the semi-kraft pulps. Preliminary results warrant the further investigation necessary to establish these facts.

VI. Relieving the Streams of Their Load of Mill Waste

Investigations should be prosecuted in cooperation with the industry to find economical way of eliminating the waste sulphite liquor. Fundamental to any use of the waste is the problem of evaporation. Use as a fuel offers the most immediate possibility of universal application. Replacement of lime by soda base may be an important aid to evaporation and combustion and should be investigated. Other lines of approach must be opened as the investigation proceeds.

The waste from strawboard mills is equally in need of investigation. A chemical recovery system analogous to that in soda pulp mills, with possibly necessary alteration of the cooking chemicals, may be a solution to the problem.

The name-plate on an "American" pump signifies over fifty years successful solution of the handling and pumping of water.

It is backed by an absolute guarantee that the pump bearing it will give satisfactory service on the job for which it is designed!

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District Sales Agencies:
Philadelphia, Pa.
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Kansas City, Mo.
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Denver, Colo.
Salt Lake City, Utah.
Phoenix, Ariz.
Los Angeles, Calif.
Charlotte, N. C.
Calgary, Alta., Can.
Boston, Mass.

Quaker City Paper Industry Is Improving

Business Transactions Reported Far in Excess of Corresponding Period Last Year—Volume of Paper Consumption Steadily Expanding—All Grades of Coarse Paper Specialties and Wrappings Going Strong—Fine Papers More Active Than Recently

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, PA., MAY 3, 1926—With a belated seasonal demand stimulating the Philadelphia paper industry, the dealers are enjoying improved business, reported to be far in excess of the same period of last year. In all the seasonal grades consumed by both fine and coarse paper customers the consumption has increased in volume within the past fortnight and judging from the type of demand, the business has the appearance of a normal late spring revival co-incident to resumption of operations in all lines of industries identified with the Quaker City manufacturing trades.

Coarse Papers Continue to Show Improvement

The turn of seasonal buying has been most notable in the coarse paper division, where all grades of specialties and wrappings have been steadily growing in volume of distribution. There are no heavy orders, with present needs the primary consideration rather than stocking for future requirements. Travelers through the state sections where industrial enterprises and fundamental industries of national reputation are the chief sources of employment, come back to the city with optimistic reports of the revival of paper orders in the territory covered. This is particularly true of the larger cities such as Harrisburg, Lancaster Williamsport, Wilkes-Barre and Scranton, where the recent renewed industrial activities have greatly improved buying posisbilities. The coal regions have begun to assume a livelier business swing after many months of curtailed trading owing to the hardships of the coal strike. Merchants and manufacturers in that section are now consuming large quantities of papers and bags of all grades, and this business is being allotted to Philadelphia distributors who have been making the rounds of the territory.

Fine Papers Enter More Active Season

Though the demand for fine papers has been gradually improving, there was reported an even more gratifying evidence of betterment within the week past, when printers and publishers entered the market for larger assortment of all grades. The coming Sesqui-Centennial Exposition is being broadly exploited by the various prominent industries and its advertising possibilities fully realized, and so these factors have been the means of stimulation of paper consumption in the fine grades for direct by mail appeal by the larger industrial enterprises, who hope to bring to this city large trade groups and visitors during the celebration of the 150th anniversary of the signing of the Declaration of Independence. As the buildings now in course of erection on the Sesqui Grounds begin to approach some proportions, and the many attractions now assured for the coming celebration materialize in tangible form by impressive structures and exhibits contracted for, the business concerns of Philadelphia are brought to a realization that this international exposition is to be a practical advertising medium for their own industry, and so to all parts of the nation here is being distributed quantities of mail matter exploiting the exposition and, incidentally the Quaker City and its numerous large enterprises which have given it the reputation of the Work Shop of the World. The paper dealers have been consequently liberally patronized for those grades of advertising papers consumed in direct by mail matter or other channels for exploitation. Book papers and news print, too, are in active demand among the printing and publishing trades.

Building Papers in Normal Demand

Although there was an evidence of freer demand for building papers in the previous week, the consumption within recent days has been dwindling to a limited scale of a specialized character. The market is normal for the Pennsylvania state territory, but in New Jersey, where much building is now under way, the demand is assuming wider proportions as the weather clears and summer gradually draws nigh.

Coarse Paper Dealers Compile Statistics

When the group of coarse paper dealers comprising the Wrapping Division of the Philadelphia Paper Trade Association met last Tuesday at the Poor Richard Club in a mid-day luncheon, the main topics of discussion were the progress of the statistical compilation of the cost of conducting business along the lines laid out by N. A. Schoenbucher, statistician of the National Association, at the recent meeting of the wholesale and retail paper merchants in this city, and the management and handling of paper and salesmanship. The discussions were general with all participating. The compilation of statistics for the first quarter of 1926 will be along the line of delivery and warehousing particularly, with other details of the cost of conducting business as experienced by the coarse paper dealers in the Quaker City trade, affiliated with the local organization. In the absence of Charles Wilder, who was scheduled to be chairman of the meeting, and the detention of Harvey E. Platt in outside business duties, the meeting was devoted almost entirely to the consideration of open forum discussions.

Supreme Court Upsets Wartime Schedule

The case of the New York and Pennsylvania Company, and its claims to the right of the wartime rate schedule set up by the Pennsylvania Public Service Commission during the period of Federal Guaranty, was overturned last Monday by the United States Supreme Court. The rates applied to paper products and their traffic within the State of Pennsylvania, but the commission's authority was attacked by the New York Central and Pennsylvania Railroads in its case against the New York and Pennsylvania Company, manufacturers of paper in this state and elsewhere.

Insurance Claims of Keystone Co. in Court

In the contest of the Keystone Paper Company over its rights to indemnity for the destruction of its mills by fire two years ago, the court of Delaware County was the scene of the hearing of the paper company in its case against the insurance companies involved, during the week. The Keystone mills were destroyed by fire, after having been in operation for more than a hundred years, the production at the time of the catastrophe having been centered in wrapping papers and wax products. The insurance companies involved contested the rights of the company to full indemnity, there being 24 concerns protesting the claims. Decision is not expected until late this week. W. Allan Lindsay, proprietor of the mills, his brothers, David Lindsay, Jr., and Horace Lindsay, have been in Media the past week, attending the court hearings.

Richie-Howarth Company to Expand

Although the Richie-Howarth Company, 1217-19 Cherry Street, have been organized as paper distributors but a short while, there is already planned an expansion in the business of the firm, both in building and the broadening of its field of activities. The construction of a two story addition to the upper portion of the building will begin within the next fortnight, when more warehousing space will be provided. The firm has been successfully conducting a specialized mill representation, featuring the American Writing Paper Company's complete lines of Eagle A papers ex-

Poller Paper Instruments Insure Accuracy

PAPER TESTER No. 400

Indicates accurately tensile strength in pounds and percentage and stretch in inches and percentage—all in one operation. Temperature makes no difference. It is the "Supreme Court" of all testing machines. No springs to get out of order. No glycerine or rubber discs to replace. All numerals are in English units and not in Continental Metric system.

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Indicates ream weight 24x36—480 and 500

These scales are furnished for weighing a full size sheet, 24x36, or a small piece. Both will indicate ream weight by direct reading. No springs. Special scale for Tissue Papers.

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For coarse or fine papers. By weighing a piece 2⅛x 3¼ the standard ream weight is accurately shown. Very accurate and reliable. Weighs less than one pound and can be carried without inconvenience.

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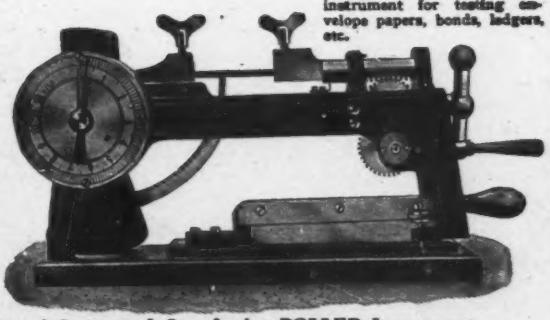


PAPER TESTER No. 399

Indicates stretch and breaking or tensile strength of paper. Operated by means of gears and screws. No springs to weaken and influence results. This machine is portable, weighing less than five pounds.

AUTOMATIC MICROMETER

Measures thickness of board and paper accurately. Best instrument on the market for this purpose.

Sole Agents for the United States and Canada for POLLER Instruments

THE UNION SELLING COMPANY

PAPER AND TWINE

210 Walnut Street, Cincinnati, Ohio

clusively. The president of the company, Anthony Richie, announces that the printing and allied industries have been responding generously to the idea of merchandising of single mill production by distributors such as it has featured by concentration of its jobbing on the American Writing Paper Company's products through an Eagle A Service House. A credit department under the management of Irwin A. Bateman, formerly credit manager for the Smythefield Company, and the Smith, Kline & French Co., has been instituted for the firm. Joseph Deal, who has for many years been associated with the local paper trade, has been added to the out of town sale organization.

National Paper Box Association Convention Plans

Plans for the business and social program of the National Paper Box Manufacturers Association Convention, to be held here May 25 to 28 at the Hotel Benjamin Franklin, have been announced by the local headquarter officials of the national body. The four day program comprises half-day sessions with the 25th devoted to the matter of production, and such speakers as Professor John G. Callan and Dr. Joseph H. Willits leading the discussion, supplemented by six ten minute men, who will give their practical experience in relation to the topic. On the 26th, management will occupy the attention of the box makers, this phase of trade work to be analyzed by W. Clement Moore, George F. Barber, H. P. Beckett, and others. The humanities and scientific side of sales will be discussed on the third day by Bartley J. Doyle and E. E. Brooks, of the Dennison Manufacturing Company. The last day will be devoted to the question of the last corner of four-square good business, "Finance," by O. Howard Wolfe, cashier of the Philadelphia National Bank and Chairman of the Clearing House Section American Bankers' Association, Farnk H. Warner, and others. The afternoons will be given over entirely to the diversions of the city with sight-seeing trips and a week-end tour to Atlantic City. The supplies exposition, featuring paper and other converting products, will be held in the Ben Franklin Hotel, while the machinery exhibit is scheduled for the Commercial Museum.

Stock in Kieckhefer Plant Destroyed by Fire

More than 300 tons of paper stock were destroyed by fire at the plant of the Kieckhefer Container Company, at Delair, N. J., last week. Six fire companies, from as many towns, were called into service by the spectacular blaze of the burning stock, which was to have been used for the manufacture of the firm's supply of paper board. The cause of the fire has not been disclosed. No harm was done to the buildings, the stock having been stored in an open shed.

General Electric Co. to Build

A $19,000,000 plant is to be constructed here by the General Electric Company for the extension of its manufacturing facilities. The plant will be one of the largest industrial buildings in the east and will eventually employ from 10,000 to 15,000 hands. The new plant will be constructed on the site of the present manufacturing plant at 70th and Elmwood Avenue. The Baltimore switch board plant is to be augmented by the addition to local headquarters. The General Electric Company manufactures motors and other electrical devices for the operation of paper mills along with its other units of power construction.

Strathmore Paper Co. Entertains Graduates

With generous hospitality, the Strathmore Paper Company entertained the guests of the Philadelphia Distributors from the graduating class of the Charles Morris Price School of advertising and Journalism, when the eight scholars journeyed by motor to the Woronoco Mills last week with the paper men. A four days tour of the mills in an educational study of paper for the younger members of the advertising fraternity was supplemented by social features and lectures given by mills officers. President H. A. Moses, of the Strathmore Paper Company, entertained the group of Philadelphia with one of his famous steak roasts at his estate in Woronoake Heights, which has been the most delightful of features of the annual executive meetings of that paper manufacturing concern. Those who journeyed to the mills from the local paper field were President Norbert A. Considine, of the Paper House; his brother and associate, Raymond J. Considine, Mrs. Considine, chaperon to the four members of the fair sex who were among the graduates; Leon Beck, Charles Beck Paper Company, and Mr. Garrett, of the Raymond & McNutt Co. Jack Luts, instructor of the class in advertising at the Price School, accompanied the party.

Henry W. Stokes Back from Europe

President Henry W. Stokes, of the York Haven Paper Company, who has been spending the past three months in a tour of Europe, is back at his desk in the Land Title Building, the local executive offices of the York Haven Company. His itinerary included a tour of the Mediterranean ports, and continental Europe, his journey having been started just previous to the National Paper Trade Convention in New York. Mr. Stokes is a former president of the American Pulp and Paper Association, and at present is president of the Wrapping Paper Manufacturers' Service, and a member of the Import Committee of the national organization.

James McNutt Discusses Sesqui Exhibit

Plans for the coming Sesqui exhibit of the paper trade were discussed by James McNutt, of the Raymond & McNutt Co., before the members of the Loyal Knights of the Round Table, at the installation of officers session, held at the Bellevue Stratford Hotel. He gave an illuminating talk on the details of paper making in the early history of the country and told of the plans to reproduce the old time methods and the first paper mill at the coming exposition, when the historic Rittenhouse Paper Mill will be reconstructed in miniature, showing the primitive hand made paper production of those early colonial times. Mr. McNutt gave the history of paper making in this country in his theme, "The Romance of Paper Making."

Trademark Profits and Protection

The D. Van Nostrand Company, 8 Warren Street, New York, has just issued "Trademark Profits and Protection," by Harry A. Toulmin, Jr. In the preface the author, in part, writes as follows:—

"The public has really written this book because it has had a generous hand in the selection of materials that have gone into it. The whole philosophy of the little volume is to teach by practical example and actual instances the rules and regulations of the trade mark law and how they may be applied to the practical affairs of business. The instances selected and the anecdotes related are those that have been found by the author to be of interest and profit in the practical world of affairs. They have been selected because they were found to be most appealing to audiences of business men when making addresses throughout the United States, on the subject, and, most appealing as evidenced by the correspondence resulting from magazine articles discussing these rules set forth in the following pages.

"The public, having taken a hand in the making of this volume and having actually selected its contents, it is hoped will find the work satisfactory and instructive.

"It has been found by experience that it is much more useful to the layman to have a legal principle demonstrated to him by an anecdote and then the rule summarized afterwards than to reverse the process; in other words, if you make a concrete statement and then follow it with the abstract conclusion, it is far more instructive and entertaining.

"It is a further object of this book to serve as a reference work so that the man of affairs engaged in business may have a handy volume for the ready securing of information on problems of trade marks, package design, the protecting of trade slogans, and the like. I have known many clients who would have saved thousands of dollars of expense if they had but had such a little work as this at their right hand."

(The price is $4.00.)

Oxford Paper Company

High Grade

Machine Finished and Super Calendered Book,
Lithograph Envelope and Tablet Papers,
Oxford Polar Coated
Oxford North Star Coated
Oxford Folding Coated
Oxford Super Calendered Book
Oxford English Finish Book

Mills at RUMFORD, MAINE

Executive Offices:

200 Fifth Avenue, New York

Duke-Price Power Sold to Aluminum Co.

Deal of Great Importance to Pulp and Paper Industry—Annual Report of Price Bros. & Co. Ltd., Shows Increase in Trading Profits Compared With Last Year—Developments on the Gatineau River—Reported Sale of Anticosti Island to Wayagamack Co.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., May 3, 1926.—Of enormous importance to the industrial development of the Province of Quebec, and, incidentally, to the pulp and paper industry is the deal just completed by which the interests of the Duke-Price Power Company have been purchased by the Aluminum Company of America. These interests comprise the power resources of the Saguenay River, with an ultimate capacity of 540,000 h.p., of which an initial installation has already been made of eight hydro electric units to develop 360,000 h.p.

As is well known, the Aluminum Company, under a subsidiary known as the Aluminum Company of Canada is making a tremendous investment in an aluminum manufacturing plant at a new city it is establishing at the headwaters of the Saguenay called Arvida. The investment includes (besides the plant and city and the power interests) the purchase for $1,900,000 of the Robervale-Saguenay Railway, and the dock and loading equipment at Port Alfred, Que.

Just prior to the announcement of the purchase of the Doke-Price interests came the news of the purchase by the Shawinigan Water and Power Company from the Duke-Price interests of 100,000 horsepower which will be carried on a 165,000 voltage transmission line either from Ile Maligne on the Saguenay to Quebec City or from Ile Maligne to Shawinigan Falls, according to Julian C. Smith, vice-president and general manager of the Shawinigan. The 140-mile power line which will be erected for this purpose will itself cost $4,000,000. The line will traverse with 90-foot steel towers the wild plateau of the Laurentide Park, crossing the height of land, and will when completed, be one of the highest-powered transmission lines on the North American continent, if not the highest.

Contracts for the use of the Duke-Price power are now as follows: The Aluminum Company of Canada contracts to take 100,000 h.p. for 50 years; Shawinigan, 100,000 h.p. for 50 years; Price Brothers & Co., 40,000 for 50 years and 60,000 h.p. for 10 years, and Port Alfred Pulp and Paper, 30,000 h.p. for 25 years. Price Brothers & Co. have the option of taking the 60,000 h.p. indicated in the foregoing for forty years after 1936, but only at an increased price.

In furtherance of the sale of the Duke-Price interests to the Aluminum Company, a syndicate of banks, including the Guaranty Company Bankers' Trust Company and Union Trust Company of Pittsburgh underwrote today an issue of $37,000,000 of six per cent bonds of the Duke-Price Power Co., which issue was over-subscribed almost immediately on being offered. The affiliation of the Guaranty Company with the Aluminum Company of America is through Richard B. Mellon, brother of the Secretary of the Treasury, Andrew Mellon, who recently was elected to the board of the Guaranty Trust Company. Both Andrew and Richard B. Mellon are large stockholders in the Aluminum Company of America.

Preference for Canada in British Market

Regarding the duty on packing and wrapping papers in Great Britain, with preference for paper manufactured within the Empire, a cable from London states that the "Board of Trade Journal" publishes an official notice from the commissioners of customers and excise defining the imported packing and wrapping paper that is liable to the ad valorem duty of 16 2-3 per cent., announced in the budget. The notice follows: "Paper whether in sheets or rolls or otherwise, or of any description known as packing or wrapping paper, including tissue paper, of a weight when fully extended equivalent to more than 10 pounds, but not more than 90 pounds to the ream of 480 sheets of double crown measuring 30 inches by 20 inches, and articles made either entirely from such paper with addition only of some adhesive substance or other material value of which does not exceed 1-6 of the total value of the whole article, shall be liable to the duty.

"For the purposes of the resolution, packing or wrapping paper and tissue paper include any such paper which is coated or otherwise treated in any manner, but the resolution does not extend to vegetable parchment, glazed, transparent paper, greaseproof, paper which forms part of another article or paper or any article made of paper which at the time of importation is in use as wrapping or packing or as a container for other goods."

If any goods mentioned as dutiable are shown to the satisfaction of the customs and excise department to have been consigned from and produced or manufactured in the British Empire, the duty chargeable is at the preferential rate of 2-3 of the full rate of 16 2-3 per cent.

Price Bros.' Annual Report

The annual report of Price Brothers & Co., Ltd., states that profits for the year show a gain of over 33 1/3 per cent. over those for the previous year at $4,263,190 as compared with $3,128,125, and after deduction of substantially higher interest charges at $786,096, depreciation of $1,199,604, and appropriation of $482,369 for restoration at Kenogami, net income available for dividends is shown at $1,795,121 as compared with $1,338,761, while preferred dividends of $455,000 left net available on common at $1,340,121 as against $1,338,761.

In his remarkes to the shareholders the president, John H. Price, says:

"The construction of the newsprint paper mill, at Riverbend St., Joseph d'Alma, was completed in accordance with programme and was producing marketable paper in the later part of December, 1925. This mill is running satisfactorily and producing a good quality of news print, almost to capacity. Your directors propose to double the capacity of this mill, that its increased production may be available by january, 1928."

The intimation that the capacity of the Riverbent mill will be doubled by January, 1928, means the Price Brothers will come second only to the International Paper Company in the world as a producer of news print, with a daily capacity of 950 tons a day.

Grand Falls Power

The New Brunswick Government has passed the bills incorporating the New Brunswick International Paper Company and authorizing the Fraser Companies, Ltd., to construct a transmission line from Grand Falls, together with the bill incorporating the St. John River Power Company.

The only debate during the passage of the bills in Committee occurred in connection with the amendment moved by the Hon. Dr. P. J. Veniot, opposition leader, who opposed the inclusion of a new section permitting the free export of unmanufactured wood from Crown lands, leased to the company under a reciprocal arrangement for the manufacture of wood, imported from the State of Maine, into pulp and paper in New Brunswick This section had been added when the bill was before the corporations committee.

Mr. Veniot, seconded by the Hon. J. E. Michaud, moved an

Correct Lubrication is Economy

REPLACEMENT and repair expense are among the heavy items in the cost of running any industrial plant. Nothing, of course, can prevent machinery from wearing out eventually. But if the life of an expensive machine can be lengthened by a year, or even by a few months, it means a great saving.

Correct lubrication will lengthen the life of any piece of machinery. But correct lubrication means more than merely filling the oil cups at regular intervals and making sure that the oil reaches the bearings.

The grade of the oil, and its quality, are just as important factors as the quantity.

Because of the several demands made upon it, the oil or grease must be of a quality to stand up under the bearing pressures, running speed and degree of heat to which it is subjected.

When high quality lubricants are used, in the grades suited to the requirements of the bearings, they will reduce depreciation cost and repair expense.

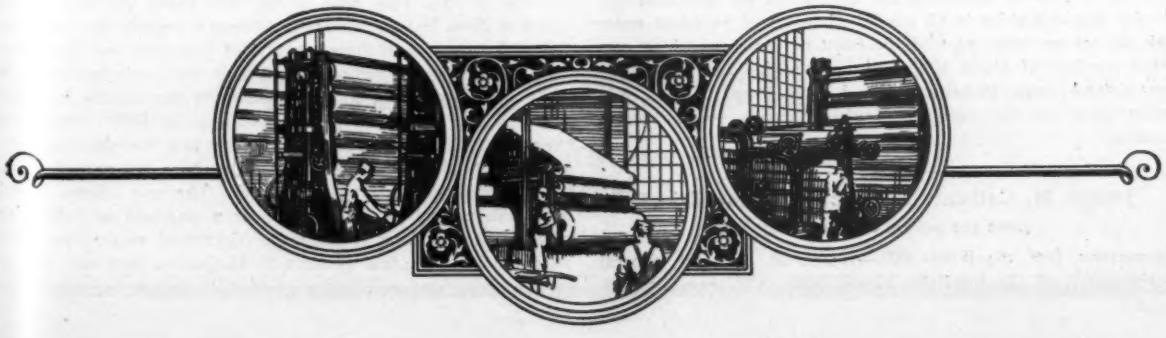
Standard Oils and Greases

are lubricants of the highest quality, and are made in many grades to suit exactly the requirements of all machinery used in the industrial world.

The lubrication engineers of the Standard Oil Company (Indiana) make surveys of industrial plants, without charge, and recommend the correct grades of lubricants for each piece of machinery.

STANDARD OIL COMPANY
(INDIANA)

***General Offices:* 910 S. Michigan Ave., Chicago, Ill.**



amendment that the section be deleted from the bill. The amendment was lost on a division in committee of 32-10.

The section provided that in the case of importations from the State of Maine by the company, the company should, subject to the direction of the Lieutenant-Governor-in-Council, be permited to export an equal quantity of unmanufactured wood cut from the Crown lands held under lease by the company free of charge.

Huge Developments on the Gatineau

A. H. White, of New York, chief engineer of the International Paper Company, in an address to the Ottawa Branch of the Engineering Institute of Canada, said that there was possible development of 600,000 h.p. on the Gatineau River properties controlled by the International Paper Company, and that the total cost of the storage dam above Maniwaki, the electrical development and paper mill will be in the neighborhood of $50,000,000. Some of the salient points of Mr. White's interesting address were:

He confirmed the purchase of Paugan Falls from the Hull Electric Company, and stated that plans and surveys had been made for its development, but that work had not actually commenced.

The power development at Paugan Falls, Chelsea and Farmers' Rapids will deliver 405,000 horse-power.

Of this amount 220,000 horse-power had been contracted for by the Ontario Hydro Electric Commission and the paper mill would require 36,000. The paper mill was to be in operation by July 1, 1927, and would turn out 450 tons of paper in 24 hours. Its construction enabled it to be doubled or tripled in size when conditions required.

The Chelsea Dam will back up water to Wakefield and six miles of C.P.R. rails and the highway will have to be moved to higher ground.

Anticosti Island Reported Sold

It is reported here that the Wayagamack Pulp and Paper Company, of Three Rivers, Que., has purchased the Island of Anticosti, in the Gulf of the St. Lawrence, for a sum in the neighborhood of $6,000,000. No confirmation or denial of the deal can be obtained at the time of writing, as C. H. Whitehead, president of the Wayagamack Company is at present in Europe.

In 1896, the Quebec Government leased the island to Senator Henri Menier, the French chocolate king, who, on his death left it to Gaston Menier. Converting it into a game preserve, Mr. Menier has striven to develop its resources in lumber, minerals and agriculture.

The island contains an area of 2,460,000 acres of land of the best quality, similar to the fine arable land of Ontario and the Genesee County, New York State. The greater part of the island is covered with valuable forests, and although the timber is not generally of the largest size it is of superior quality, and well adopted for pulpwood. Indeed, a large export trade in pulpwood has been carried on for years. The island has over 300 miles of sea coast, is about 140 miles long and 35 miles wide in its broadest part, with an average breadth of 27 miles. There are numerous harbors, which are comparatively safe for seagoing ships in all winds. Streams of excellent water reach the sea on every part of the coast of Anticosti. The population consists of about 400 people, some of whom are tenant farmers, and some gamekeepers and lumbermen. There is a rossing plant on the island, and also railways for lumbering operations.

Joseph M. Cathcart Resigns From Interlake

[FROM OUR REGULAR CORRESPONDENT]

MERRITTON, Ont., April 29, 1926.—Joseph M. Cathcart, general superintendent of the Interlake Tissue Mills, Ltd., here, has resigned.

W. B. Stevenson Heads Storrs & Bement Co.

BOSTON, Mass., May 3, 1926.—The Storrs & Bement Company announces the resignation of Frank B. Cummings who has been associated with the corporation as its president since 1919 and also the following changes in its organization: William B. Stevenson, president; William N. Stetson, Jr., vice president and secretary; Bryant McQuillen, treasurer; George L. Webb, assistant treasurer.

Mr. Stevenson, who becomes president, having taken the office of treasurer temporarily following M. F. McQuillen's death, has been engaged in the paper business for more than 25 years and his experience covers both the manufacturing and mercantile branches. He took up the study of law and was admitted to the Massachusetts bar in 1909. He is a past president of the Boston

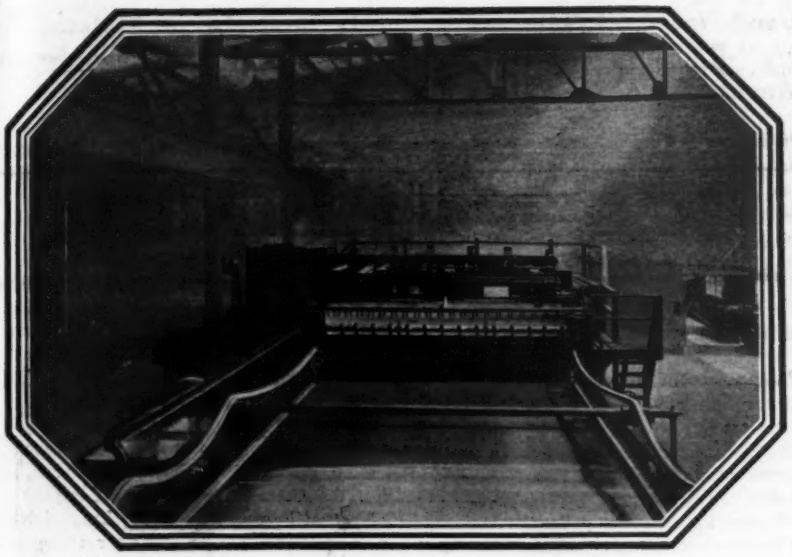
W. B. STEVENSON

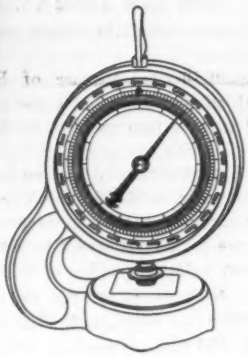
Paper Trade Association and a director of the National Paper Trade Association.

Mr. Stetson was for ten years with the Bay State Paper Co., and came with Storrs & Bement Company in 1919. His ability and pleasing personality have won a large number of friends in the trade who will be pleased to hear of his new and well deserved honors. He is prominent in Masonry and is a past master of Rural Lodge, Quincy.

Mr. Bryant McQuillen, the new treasurer, is the son of the late Robert C. McQuillen who was treasurer of Storrs & Bement Company at the time of his death in 1912. When his father died Mr. McQuillen left Williams College and entered the employ of Storrs & Bement Company, starting in the Accounting Department and serving in the various departments of the Company under the tutelage of his uncle the late William F. McQuillen.

Mr. Webb has been with Storrs & Bement Company for thirty years and has been the manager of the New Haven branch, since its establishment in 1919. Since that time the business has developed so that they now occupy five times the original floor space at New Haven. Storrs & Bement Company has been established for more than three-quarters of a century and the concern has been long and favorably known in the paper industry. Mr. William F. McQuillen and his brother the late Charles M. Bryant, acquired the Storrs & Bement Company in 1887. Under their management the concern grew rapidly and has developed to a point where they now have branches in New Haven and Springfield with a personnel of 133 people. The new officers have an admirable record of achievement as a standard to follow, and with a fine working organization developed under the careful supervision of the late William F. McQuillen, they will undoubtedly maintain and add to the prestige of Storrs & Bement Company.





Does Your Paper Show Excessive Caliper Variation?

When you use a paper thickness gauge does the instrument reveal that you are making paper of decidedly irregular thickness or is your product uniform in caliper with a corresponding excellence in printing qualities?

If it is of uniform or fairly uniform caliper how much time and labor does this approximate excellence represent?

The importance of making printing papers of even thickness and of eliminating many of the lumps and foam spots cannot be over stressed. The same thing holds true of waxing papers, and in fact, any paper is better and stronger, and production costs are lowered, if it is even in caliper and contains few lumps and foam spots.

You can readily make a sheet uniform in thickness across the entire width of the wire, avoiding even thin edges next to the deckle and at the same time help to eliminate many foam spots and lumps, if you equip your Fourdrinier, Harper or Yankee machine with a patented Voith High Pressure Stock Inlet. Furthermore, your cost of production will be lowered.

Write today for your copy of an illustrated booklet containing full information about the Voith Inlet. An experience contained in this booklet is that of a mill where an improvement of 75% in caliper variation was gained immediately upon installing the Inlet. The booklet gives more particulars regarding this and other instances.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

$25,000,000 Company to Make News Print

Kimberly-Clark Company and New York Times Are Jointly Interested in Ontario Project—Produces Its Own Power—Rights to Two Hydroelectric Sites and Large Timber Area Among the Assets—Mills Will Start in 1928

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., May 3, 1926.—The Spruce Falls Power and Paper Company, Ltd., last week received a provincial charter authorizing the construction and operation of large hydroelectric power plant, pulp and paper mills at and near Kapuskasing, Ontario, on the water courses of Hudson Bay.

New York Times Co. Jointly Interested

At the same time J. H. Black, general manager of the Spruce Falls Company, Ltd., a company established in 1920, authorized the statement that the Kimberly-Clark Company of Neenah, Wis., owners of all of the capital stock of the Spruce Falls Company, Ltd., had entered into an agreement to transfer all the assets of the latter company to the Spruce Falls Power and Paper Company, Ltd., and had also entered into an agreement with The New York Times Company, publishers of *The New York Times*, whereby, on the transfer of the assets of the Spruce Falls Company, Ltd., they become jointly interested in the independent company, whose charter was today granted.

Th full development of the enterprise involves an investment of $25,000,000, the daily production of 500 tons of news print and upward of 120 tons of sulphite, and electric power for other purposes in connection with the industry.

Great Timber Area Leased

The controlling shares of the Spruce Falls Power and Paper Company, Ltd., will be held by the Kimberly-Clark Company, which will operate the mills. Among the assets taken over from the Spruce Falls Company, Ltd., are a sulphite plant, now producing at the rate of about 110 tons daily, and agreements with the Ontario Government giving cutting rights over an area of more than 4,500 square miles, and leases to develop water powers at Smoky Falls and Devil Rapids, both located on the Mattagami River.

Kapuskasing, where the present sulphite mill is situated, is on the main line of the Canadian National Railroad transcontinental route, about sixty miles west of Cochrane. The powers to be developed at Smoky Falls and Devil Rapids are some forty miles north of the mill site.

To Furnish Employment to Large Number

Mr. Black states that this plant during construction and when completed will furnish employment to a large number of Canadian citizens, and so far as possible all materials and equipment will be purchased in Canada. A contract has already been let to Morrow & Beatty of Peterborough, Ontario, for the construction of the railroad and transmission line connecting the power plant and the sulphite mill at Kapuskasing, from which point power will be transmitted during construction at Smoky Falls. This work is already well under way.

Trains Young College Men

It is the policy of the Kimberly-Clark Company to take young college men after graduating and train them for special positions in their own laboratories. The same policy will be followed by the Spruce Falls Power and Paper Company, and several young graduates of Canadian universities will be chosen, sent to the Kimberly-Clark mills, put through intensive training and ultimately employed at Kapuskasing.

Mr. Black stated that the construction work would be done from plans by George F. Hardy, 305 Broadway, New York, and that four 219-inch paper-making machines would be the original installation. It is expected that the new company will be producing paper during the summer of 1928.

One of Oldest Companies

The Kimberly-Clark Company of Wisconsin is one of the oldest paper companies in the United States. Established in 1872, and at present directed by F. J. Sensenbrenner, it has prospered and grown to a point where it now manufactures approximately 1,000 tons of pulp and paper daily. Its mills, located in Neenah, Appleton, Kimberly and Niagara, Wis.; Niagara Falls, N. Y., and the Province of Ontario, produce rotogravure, magazine, catalog and book paper besides a large line of paper specialties and other paper products, including a line of trade-marked specialties, cellucotton, a hospital absorbent, dental rolls, etc. Through its subsidiaries, the Cellucotton Products Company of Neenah, Wis., and Cellucotton Products Company, Ltd., of Niagara Falls, Ontario, and Toronto, it also manufactures the trade-marked sanitary products kotex and kleenex. Its establishments at Niagara Falls and Toronto were built especially to take care of the Canadian and British Empire trade.

To Furnish Times News Print

The new company will supply all the news print required by *The New York Times*, estimated to be at present about one-third of the maximum production of the mills. *The New York Times* consumed during 1925 more than 80,000 tons of various grades of paper.

Auditor Finds for Whitney Bros., Inc.

BROCKTON, Mass., April 29, 1926.—Litigation pending for five years ended in the Superior Court here today when Martin White of Boston, sitting as auditor, found for Whitney Bros., Inc., dealers in paper, twine, bags and boxes, 34-36 Farnsworth street, Boston, Matthew O. Byrne and Charles A. Shaw, all of Boston, in the action brought against the defendants by Josiah B. Reed of Weymouth, a former stockholder and director in the concern.

The plaintiff alleged that the defendants had conspired to oust him from the office of treasurer and director, to deprive him from participation in the affairs of the corporation, depriving him of his salary and depressing and debasing the value of his stock and refusing to pay earned dividends.

The hearing before the auditor lasted 43 days. The decision of the auditor completely exonerates the defendants from the charges and adds that the defendants devoted themselves assiduously to the prosecution of the business of the concern for the welfare of all its stockholders.

Z. W. Ranck Elected Bank Director

DAYTON, Ohio, April 20, 1926.—Z. W. Ranck, president and general manager of the Crystal Tissue Paper Company at Amanda, has just been elected a director of the Oglesby Barnitz Bank and Trust Company of Middletown, succeeding Joseph M. Iseminger, who died on April 3. Mr. Iseminger was widely known in the paper trade having constructed some of the largest mill buildings in this section.

The Board of Directors of the Oglesy-Barnitz bank which does a big business with the paper mill owners, now includes W. O. Barnitz, president; W. D. Oglesby, vice president, and C. Ed. Sebald, cashier; and Mr. Ranck and D. E. Harlan, the latter also being prominently identified with paper manufacturing.

SAVE

Excessive Calendering

A paper manufacturer, known to you all, after operating one Book Machine with a

Puseyjones

Smoothing Press

has ordered ten other machines so equipped.
Is it not worth your while to know why?

ASK US

The Pusey and Jones Company

Wilmington, Delaware

Paper Demand In Toronto Shows Slowing Up

Unfavorable Weather Has Adversely Affected Business Generally and This Has Been Reflected in the Paper Trade—With More Favorable Weather, However, a Noticeable Improvement Has Already Set in and This is Expected to Continue

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., May 3, 1926.—Owing to the inclement weather which prevailed during the greater part of April, and the late spring, there was some slowing up in the paper business generally. This is the report of practically all distributors and it is believed that the comparative quietness in other lines of trade had its effect upon the paper situation. However, with the ushering in of the month of May, distinctly fine days have arrived and a noticeable improvement is expected. The mills are all busy at the present time and so far as jobbers are concerned, stocks in supercalendered and machine finish books are low. Deliveries have been slow from the mills; this is accounted for by them by the fact that several publishers have recently placed pressing orders for large consignments of book papers.

Most of the book mills are also endeavoring to develop an export trade with South America and also to increase their shipments to Australia and New Zealand. They are concentrating on those lines where the entire control of the raw material comes under the direction of the producer. Plants are thus able to turn out those specialties which find the widest measure of favor in certain foreign fields.

On the whole the situation, so far as the productive end of the paper business is concerned, is encouraging. The first three months of 1926 were very satisfactory to the wholesale distributors but it must be confessed that April did not come up to the mark. However, May is expected to show a decided increase The British Budget, which has just been brought down, providing for a preferential duty on wrapping paper, is expected to aid the kraft producers in Canada, such as the Wayagamack Pulp and Paper Company, of Three Rivers, Que., and the Dryden Paper Company, of Dryden, Ont. These concerns will stand to benefit through the new legislation. Canada is the only country in the Empire which can receive advantage through this tariff and it is believed that, under the new classification, a number of other lines of papers can be included in shipments to the Old Country according to the interpretation of the British custom duty. The outcome is awaited by makers of kraft, manila and fiber papers with considerable interest.

Will Double the Paper Output

Hon. Charles McCrea, Minister of Mines for the Province of Ontario, speaking at Haileybury, Ont., recently, said that the Ontario Government had completed a survey of the pulp and paper resources of the north and found that a doubling of the output could be brought about without unduly depleting the source of supply. Within the next three years some $85,000,000 will be expended in the expansion of this important industry in Northern Ontario. Referring to mining, the Minister expected this year's production of the gold and silver mines to be higher by $5,000,000 than last year, while an additional increase of $10,000,000 is looked for in 1927, or a total of around $45,000,000 next year.

Sale of Mattigami Assets

By an injunction executed on behalf of the unsecured creditors, the assets of the Mattigami Pulp and Paper Company, Toronto, whose plant is located in Smooth Rock Falls, Ont., are still in possession of the old company. The sale, which was to have been held in Toronto some time ago, was postponed for 60 days. In the event of no higher bidding being obtained at the sale at the end of May, the debenture holders will acquire the assets; they, in turn, will pay off the old bondholders with accrued interest to date.

The debenture holders will transfer the assets to a new company and will receive one $100 share of 7 per cent cumulative preferred stock and one share of common stock without par value in exchange for every $100 debenture share which the present company has outstanding. The new company will issue first mortgage bonds and the proceeds will be used to pay off the old bondholders and other outstanding liabilities.

Notes and Jottings of the Industry

S. F. Duncan, treasurer of the Provincial Paper Mills, Toronto, and Mrs. Duncan have returned from spending a holiday at Atlantic City.

William J. Blackley, of the Beveridge Paper Company, Indianapolis, Ind., was in Toronto last week calling upon the paper trade.

Norman Jones, of Samuel Jones & Co., London, Eng., manufacturers of gum papers, paid his first visit to Toronto as the representative of the firm during the past few days.

R. B. Hall, manager of the Toronto office of the Howard Smith Paper Mills, is spending a few weeks at Asheville, N. C., for the benefit of his health.

C. Howard Smith, of Montreal, former president of the Canadian Pulp and Paper Association, was in Toronto last week calling upon friends in the trade.

Ed Smith, who has been manager of the Cornwall, Ont., mill of the Howard Smith Paper Mills, has been appointed assistant to the managing director of the company and will in the near future remove to the headquarters in Montreal. His place at Cornwall will be taken by E. K. Robinson, who has been manager of the timber limits of the Howard Smith Co. in Gaspe, Que.

George A. Day, of Toronto, who for some time has been manager of the Industrial Laboratories, has taken a position on the technical staff of the Brown Corporation, LaTuque, Que.

Among the callers on the Toronto trade during the past week were G. D. Falkenburg, of Price Bros. & Co., Quebec City, and J. Humphries, of the Brown Corporation, LaTuque, Que.

Mr. Thompson, of the De Schryver Company, Limited, whose headquarters are in New Zealand, where they handle large quantities of Canadian papers, is spending some time in Toronto on a visit to the local branch of the organization, 110 Wellington street, West.

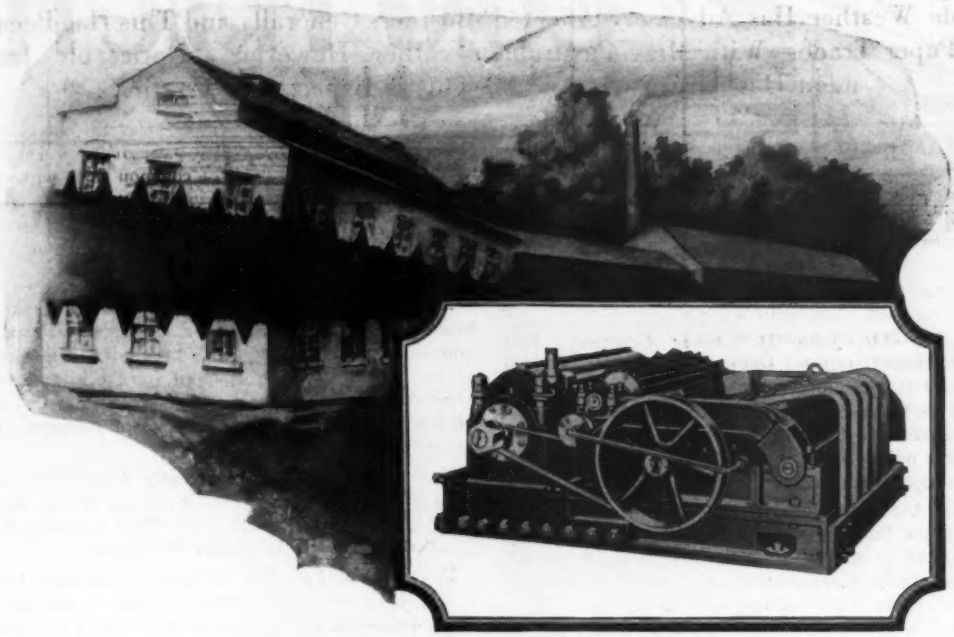
The Wahcondah, which was purchased some time ago by the Spanish River Pulp and Paper Mills, for carrying raw and finished material from Little Current, Ont., to Chicago and Detroit, called at Toronto during the past week. The Wahcondah has a registered tonnage of 1,575 tons.

At the regular quarterly meeting of the Toronto Carton Club, held at the King Edward Hotel, there was a large attendance, including visitors from the paper box manufacturing trade in a number of Ontario cities and towns. T. L. Crosley, president of the Industrial Laboratories, gave an instructive address on the technical development of paper containers and their manufacture.

James O'Hara Resigns From Crown-Willamette

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., April 29, 1926—James O'Hara, who for the last ten years has been superintendent of the paper mills of the Crown-Willamette mills at Lebanon, Ore., has resigned and retired, due to ill health. Before coming to the west to take the position just vacated, Mr. O'Hara had been in the paper buisness in the East for a quarter century, connected with various large mills there. He will spend a year in travel with his wife and return to Oregon for his permanent home.



The Logical Mouth of the Paper Mill

Beaters are ofttimes referred to as the "stomach of the paper mill," but in many cases they are also forced to perform the functions of a mouth. A beater is no more designed for "chewing-up" solid pulp laps or sheets than our own stomachs are fitted to digest solid masses of unchewed food and the effects of compelling either to do so are similar.

When solid masses of pulp are jammed into the beater, 25% of the total beating time is, in many cases, actually "chewing-up" time. Aside from this loss of time, labor and production,—the constant danger of jumping the roll or plugging the backfall conclusively proves that a beater should not be used as both a stomach and a mouth.

Beaters are designed for drawing out the pulp fibres whereas, the Arpeko Shredder is designed to chew the pulp into particles slightly larger than a postage stamp. This shredded pulp allows a denser furnish, disintegrates quicker, flows easily under the roll and is less liable to plug the back fall. The pulp is shredded instead of cut because water penetrates its torn, open edges quicker than closed, knife cut edges. Furthermore, water is introduced at the shredding point under extremely favorable conditions (like, and for the same reason that, saliva flows in our own mouths) thus hydration is well advanced before the pulp leaves the shredder.

Since the Arpeko Shredder relieves the beater of preliminary mastication of pulp, thereby greatly increasing production,—it is the Logical Mouth of the Paper Mill.

Literature on Request

Salient Features

(1) Suitable for dry, partly dry or partly frozen, laps, sheets or rolls.
(2) 50 H.P. Motor will operate at rate of 4 dry tons of hard kraft sheets per hour.
(3) Only 5 H.P. required to start and bring up to running speed.
(4) Timken Roller Bearings insure long life and save Power, Lubricant, Time and Repairs.
(5) Revolving blades will shred 400 dry tons without changing.
(6) Blades can be removed, conditioned and replaced by one man in three hours time.
(7) Pulp is shredded or torn, not cut, insuring easy hydration.
(8) Shredded product contains 75% water due to shower at shredding point.

ARPEKO

Pulp Shredder ~ Chip Screen ~ Wood's Ideal Chip Breaker

RYTHER & PRINGLE CO.
Carthage, New York

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Philadelphia, Pa.—The John M. Driver Company, 1644 North 55th street, manufacturer of paper products, has asked bids on general contract for its proposed new plant at Lancaster avenue and 57th street, to be one and two-story, 60 x 275 feet, estimated to cost in excess of $90,000, with equipment. A one-story steam power house will be built. Stetler & Deysher, 1015 Chestnut street, Philadelphia, are architects.

Albany, N. Y.—A contract for a second addition to the plant of the A. P. W. Paper Company, 1273 Broadway, Albany, at North Albany, has been let to the H. K. Ferguson Company, Euclid avenue, Cleveland, Ohio, contractor for the first building previously announced. The later building will be one-story, 80 x 200 feet, estimated to cost about $50,000, and will be used largely for storage and distributing service.

Kansas City, Mo.—The Midwest Wall Paper Company has completed plans and will proceed with the erection of a new three-story plant at 1012 Locust street, estimated to cost approximately $100,000, with equipment. A contract for the building has been let to James E. Taylor, Reliance Building. H. Alexander Drake, Reliance Building, is architect.

Shelton, Wash.—The Washington Pulp and Paper Company, Port Angeles, Wash., is reported to be considering plans for a new branch mill at Shelton, where several sites are said to be under advisement.

Baltimore, Md.—The Baltimore Paper Box Company, Key Highway near Covington street, has awarded a general contract to the Forbes-Murphy Construction Company, 406 Park avenue for its proposed new one and two-story addition, to be 80 x 200 feet, and 50 x 80 feet, respectively. A portion of the structures will be used for storage and distributing service. Daniel S. Sackerman, 125 East Baltimore street, is architect. Wolf Catzen is president.

Rensselaer, N. Y.—The F. C. Huyck & Sons Company, Albany, N. Y., manufacturer of paper mill supplies, has work in progress on an addition to its power house to double the present capacity. Additional equipment will be installed. It is expected to complete the work during the summer.

Miami, Fla.—E. H. Dutcher, 128 N. E. 46th street, and associates are said to have preliminary plans under advisement for the establishment of a local paper goods plant. Inquiries are being made for equipment and it is expected to purchase requirements at an early date.

Camden, N. J.—The MacAndrews & Forbes Company, Third and Jefferson streets, manufacturer of board products, etc., has filed plans for the erection of a new addition to its mill, to be three-story, 58 x 375 feet, reported to cost about $150,000, with machinery. A contract for building only has been let to Barclay White & Co., 1713 Sansom street, Philadelphia, Pa. It is purposed to develop considerable increase capacity at the plant, with extensive additions in working force. William W. Walker is vice-president and directing manager.

Kanawha, W. Va.—The Owens Bottle Company will soon proceed with superstructure for a new two-story brick and steel addition to its local plant, 120 x 1,000 feet. A considerable portion of the structure will be equipped for the manufacture of corrugated paper boxes, cartons, etc. The structure will cost in excess of $200,000. W. E. Plummer is plant manager. Headquarters are at Toledo, Ohio.

New York, N. Y.—Fire recently damaged a portion of the plant of Joyce & Hassett, 153-55 Greene street, manufacturer of paper boxes and containers. An official estimate of loss has not been announced. It is planned to rebuild.

Philadelphia, Pa.—The Edwin J. Schottle Company, 533 North 11th street, manufacturer of paper boxes, cartons, etc., will proceed with the construction of its proposed new nine-story plant at 1026-30 Green street, estimated to cost about $125,000, with equipment. It is purposed to remove the present factory to the new location as soon as the structure is completed, providing considerable additional machinery. A contract for the building has been let to the Nelson-Pedley Construction Company, 1512 Chestnut street. J. Fletcher Street, 1,120 Locust street, is architect.

St. Louis, Mo.—The Evertz-Etz Paper Company, 1542-46 South 7th street, is said to be planning the early rebuilding of the portion of its plant recently destroyed by fire with loss estimated at $30,000, including equipment and stock.

Brooklyn, N. Y.—The Banner Folding Box Company, Inc., 219 36th street, manufacturer of paper boxes and containers, has leased two floors in Building No. 3, Bush Terminal, South Brooklyn, for expansion. Increased capacity will be arranged.

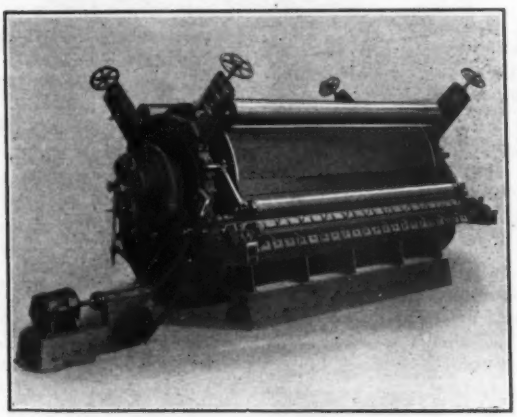
Kapuskasing, Ont.—The Spruce Falls Power and Paper Company, Ltd., recently formed by officials of the Kimberly-Clark Company, Neenah, Wis., to take over and expand its former subsidiary, known as the Spruce Falls Company, Ltd., has engaged George F. Hardy, 305 Broadway, New York, engineer, to prepare plans for a proposed news print mill to be erected in the vicinity of Kapuskasing. The plant will be equipped for an initial output of 500 tons per day. An existing sulphite mill will be extended and hydroelectric power developments carried out at Smoky Falls and Devil Rapids. Work on the latter has been commenced. The entire project will cost in excess of $15,000,000. F. S. Sensenbrenner is president of the parent company.

East Angus, Que.—The Brompton Pulp and Paper Company has tentative plans under advisement for extensions and improvements in its local plant, including the installation of additional equipment. The estimated cost has not been announced.

Helsingfors, Finland—A local company has preliminary plans under way for the construction of a new sulphite cellulose mill in Kirkoniemi Parish, to be equipped for a monthly output of close to 2,000 tons. It is purposed to begin work during the summer and equipment purchases will be made in the near future. Information available at the office of the Bureau of Foreign and Domestic Commerce, Washington, D. C., reference Finland No. 203,261. The American Consulate, J. F. McGurk, consul, Helsingsfors, also has information regarding the project.

WASTE

Just a word of five letters but in every manufacturing enterprise each letter represents a handful of money "thrown away"



"OLIVER"

Just one more letter in this word but it's a deadly enemy of

WASTE

OLIVERS used in Paper Mills mean changing waste into gain by gathering in money instead of throwing it away. Try an OLIVER wherever you find waste of stock, labor, space or time.

We can show by actual results how OLIVERS pay for themselves in a few months.

Ask any of our offices

Oliver Continuous Filter Co.

San Francisco
801 Cunard Building

New York
1423 Aeolian Building

London
11 Southampton Row

Johannesburg, South Africa
E. L. BATEMAN, The Corner House

New York Trade Jottings

Alan Goldsmith, of the Mead Pulp and Paper Company, Dayton, Ohio, was a New York visitor last week.

* * *

G. F. Steele, the well known specialist in news print, sails for South America next Saturday, and plans to spend three months in that region.

* * *

W. L. Hall, of Hot Springs, Ark., consulting forester for many southern pulp and paper manufacturers, spent a few days in New York last week.

* * *

Colonel W. E. Haskell, formerly vice-president of the International Paper Company, returned to New York last week after a four months stay in Florida.

* * *

Hyman Jacobs, the well known dealer in paper specialties, has removed to more commodious quarters at 285 Madison Avenue, New York. His new telephone number is 4290 Ashland.

* * *

G. F. Laycock, of the Anglo-Newfoundland Development Company, Grand Falls, N. F., arrived in New York last week after spending the winter in England and France, and spent some time in the city before proceeding to headquarters.

* * *

The St. Maurice Valley Sales, Ltd., who have assumed all the contracts and obligations of the St. Maurice Sales Company and the Belgo Export Company, have opened a New York branch at 342 Madison Avenue, in charge of T. T. Waller, vice-president.

* * *

Shigeo Nakine, who has been studying and working in paper mills in this country for the last eight years, sailed for Japan on Tuesday and on his arrival expects to connect with one of the leading paper houses in his native country.

* * *

At the regular weekly luncheon of the Salesmen's Association of the Paper Industry, held last Monday at the Town Hall Club, New York, Gustav Astlund, of the Staff of the Swedish Consulate General, gave an interesting address on "Pulp Market Conditions."

* * *

M. Schlanger & Sons, Inc., and the West Shore Paper Company, have been organized under the name of the West Shore Paper Company, Inc., and are located at 27 Great Jones street, New York. The new organization will carry a full line of paper and paper specialties, and will be in a position to give improved service.

* * *

Sol Ash, president of Sol Ash, Inc., paper stock dealers and importers, of 1440 Broadway, New York, is scheduled to sail for Europe on May 22, aboard the steamer *Leviathan*. Mr. Ash intends to visit London, Paris, and various European pulp and rag centers, in the interest of the new corporation. It is his intention to establish direct connections with these centers.

* * *

The Swedish Chamber of Commerce of the U. S. A., which ever since its organization nineteen years ago has maintained offices in the Produce Exchange Building, 2 Broadway, New York, has, because of expanding activities, moved its headquarters to larger offices at 25 Beaver street. The Swedish Chamber of Commerce of the U. S. A. is the second oldest foreign Swedish Chamber of Commerce, antedated by only one year by the Swedish Chamber in London.

* * *

Under the auspices of the Women's League for the Protection of Riverside Park, in cooperation with the Department of Parks, Borough of Manhattan, New York, the tercentenary of the landing, May 4, 1626, of Peter Minuet, the first Governor of New Amsterdam, was commemorated. A special feature of the proceedings was the dedication of the Memorial Grove of Trees, representing each of the States of the Union, at Riverside Park and 116th street. R. S. Kellogg, president of the State of Kansas Society, and secretary of the News Print Service Bureau, represented the Governor of Kansas.

The Challenge of Life

By C. H. Tiffany, Traffic Manager, (retired) New England Paper & Pulp Traffic Association, Boston, Mass.

Judge Charles Forrest Moore issued not long ago a book of genuine power. Those who have only known the Judge by his addresses of flashing wit at banquets of lawyers, bankers, paper manufacturers, traffic clubs and others have little supposed the depths of character revealed in this book. "The Challenge of Life" is literally de profundis of a strong man's soul. There is nothing of the appeal of the "best seller" class of books here, but a man who can bring to us from extreme misfortune the courageous and confident philosophy of life as Judge Moore has done, should have a large and grateful audience.

The luminous Introduction by the author's distinguished friend The Reverend Doctor S. Parkes Cadman is a notable tribute to Judge Moore and his book and reflects honor on both gentlemen. In view of the tragic beauty of the dedication of the book to the memory of Donna whose Mother, the Judge's daughter of the same lovely name, I knew when herself a delightful child "of imagination all compact," it is fitting to recall the beautiful words from O'Reilly's Statues in the Block—

> I see my darling in the marble now—
> My wasted leaf—her kind eyes smiling fondly,
> And through her eyes I see the love beyond,
> The biding light that moves not—and I know
> That when God gives to us the clearest sight
> He does not touch our eyes with Love, but Sorrow.

For years Judge Moore was prominent in several worthy fields of human endeavor until he broke physically, but with the "Eternal Spirit of the Chainless Mind" strengthened and sublimated. PAPER long enlisted his constructive service, and traffic management in natural sequence. He was Secretary, or field executive of the Statistical Bureau of book paper manufacturers and was an early President of the Traffic Club of New York, probably the continental leader of these important modern business-social organizations. The book is instinct with loyalty and friendship, of themselves high devotional qualities.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

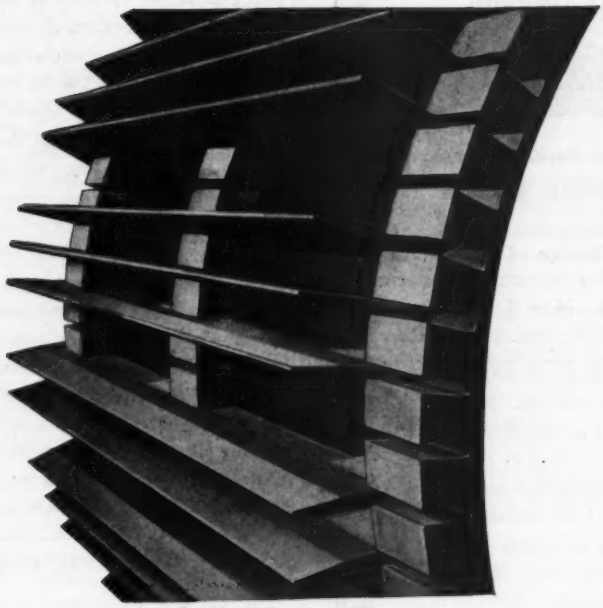
WASHINGTON, D. C., May 5, 1926.—The Government Printing Office has received the following bids for 11,725 pounds wood manila tag board, 12 x 18—33½: Whitaker Paper Company 5.37 cents per pound; Mathers-Lamm Paper Company, 4.84 cents; R P. Andrews Paper Company, 5.2 cents; Reese & Reese, 5.24 cents; Dobler & Mudge, 5.19 cents; Barton, Duer & Koch Paper Company, 5.25 cents; R. C. Osburn Paper Company, 5.75 cents; and Old Dominion Paper Company, 5.74 cents.

The Printing Office also has received the following bids for 36,000 pounds binders' board, No. 2: 20,000 pounds—25 x 30—No. 18 and 16,000 pounds—25 x 30—No. 40: Whitaker Paper Company, $74.97 per ton; The Davey Company, $80.00; Mathers-Lamm Paper Company, $81.00; Barton, Duer & Koch Paper Company, $74.75; Dobler & Mudge, $72.75; Lindemeyr & Harker, $75.50; and Aldine Paper Mills, Inc., $72.50 less 1 per cent.

The Government Printing Office will receive bids on May 10 for 36,000 pounds (21,600 sheets) of 25 x 30—No. 30, No. 2 grade, of binders' board. Bids will also be received on the same date for 266 pounds (2,000 sheets) of Quaker drab cloth-lined cover paper.

The Mathers-Lamm Paper Company has been awarded the contract for furnishing the Government Printing Office with 11,725 pounds (350 reams) of 12 x 18—33½, wood manila tag board at 4.84 cents per pound, bids for which were received on April 26.

Grow old,—but not infirm



Section of Bandless Roll showing method of inserting bars.

We have been told by a prominent Board Manufacturer (name on request) that he "seldom got full wear out of his flybars. Something usually happened," he explained; "a band or a bar broke and wrecked the roll. Now," he says, "we get full wear, as we are equipped with Downingtown Bandless Rolls."

Should a bar in a Downingtown Roll become injured, it is a simple matter to insert a new one. The wood filling next to the injured bar is first removed and the bar backed out, without taking the roll from the lighters. A new bar and filling is inserted, then roll is ready for use.

No shims, wedges, bolts, nuts, bands, fusible metal, etc., are used, and no special tools required.

Send us your old rolls and let us rebuild them with bandless bar heads on your shaft.

Catalog on Request

DOWNINGTOWN MANUFACTURING COMPANY
Paper and Pulp Mill Machinery
EAST DOWNINGTOWN, PA., U.S.A.

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXII New York, May 6, 1926 No. 18

AN OPPORTUNITY FOR PUBLIC SERVICE

The PAPER TRADE JOURNAL has received the following letter from Mr. E. H. Anderson, director of the New York Public Library, which explains itself:

"The New York Public Library subscribes for the PAPER TRADE JOURNAL through its agent. A file of the publication is to be maintained permanently in our reference collection. We lack vols. 1 to 25 (previous to 1897), however, and as we feel the value of the file will be much greater if it is complete from the beginning, we are most desirous of obtaining these issues.

"An inquiry concerning these issues has already been made, and on September 30, 1924, you replied that the numbers were out of print. In view of the importance, however, of completing our file, we are venturing to make a suggestion. It is, that a notice be inserted in one of the forthcoming issues of the PAPER TRADE JOURNAL to the effect that these issues are missing in the New York Public Library's file and the courtesy will be highly appreciated if readers, who no longer need their copies, will present them to us. This method of obtaining missing numbers is frequently employed for us by publishers and almost invariably with successful results. Any further courtesy you may extend to us will be highly appreciated."

The PAPER TRADE JOURNAL is very glad to publish this request and it hopes that it will be the means of supplying the library with the back volumes desired.

CANADA'S PLACE IN RAYON INDUSTRY

When it was stated, at the recent annual meeting of the Canadian Pulp and Paper Association, that about half of all the raw material used in the world's production of rayon was supplied by Canada there were many who doubted the statement. The annual report of the International Paper Company, just published, now confirms this statement, however, for President A. R. Graustein, in the course of his remarks, says:

"The Kipawa bleached sulphite mill is now producing 50 per cent of all this material used in the world for the manufacture of rayon, or artificial silk."

The Kipawa sulphite mill is one of the properties acquired by the International Paper Company from the Riordon Company. It is situated at Temiskaning, on the border between Ontario and Quebec. It has a daiiy capacity of 250 tons, at which it is now operating. The International Paper Company is now planning extensive additions to the mill.

In this connection it is interesting to note that the world's production of rayon last year was estimated at 185,000,000 lb., of which 52,000,000 lb. was the output in the United States. R. G. Dun & Co.'s New York *Review* refers to rayon as the wizard of fibers, and states that all the goods the rayon plants can turn out are being absorbed. During 1925 cotton goods mills became the largest customers of the rayon factories in supplementing knitted goods and hosiery. A great deal of doubt is still expressed concerning the ultimate place the fiber will take in the textile industry, says the *Review*, due, perhaps, to the imperfections yet to be overcome, and to the lack of education on the part of customers concerning the best way of handling it in the laundries and in general wear. The colors used in it can be made as fast as any used in any other fiber, and in tensile strength it is not surpassed by silk when it is properly made and handled. Its wide use in the knit goods trade has led to a sharp contraction in the output of lisle or all-cotton hosiery, and it is really becoming a rival of silk in the choice grades of women's hosiery. It is very rapidly supplanting silk as a lingerie fabric and for knit underwear. Its use in the upholstery trades is progressing wonderfully, both as a decorative fiber and as a material for lightweight curtain materials.

NO ADVERSE REACTION TO TRADE

Business will adjust itself to present conditions of production and consumption without a period of depression, in the opinion of members of the Executive Council of the American Bankers Association, who are holding their annual spring meeting this week at Pinehurst, N. C. The collapse of the stock market boom is said to have depressed sentiment, but is not believed likely to forecast a general reaction in industry and trade.

Oscar Wells, President of the First National Bank, Birmingham, Ala., and President of the association, reviewed the situation as follows: "Since the beginning of the year some adverse symptoms have put in an appearance. The stock market is the most spectacular and perhaps the most significant, whether viewed as a cause or an effect.

"Either from the conditions of the stock market or for the same reasons which produced the slump in stocks, the activity in real estate in several sections, and especially in Florida, has suffered a decline. General business seems not to have been more than slightly disturbed as yet though commodity prices have continued their downward trend The feeling of the banker is that industry cannot be sustained in the fullness of its present production if the elements upon which consumption depends get out of line. Many believe that the slowing up of the speculative tendencies will have a good effect on business, and if crop prospects continue fair there is nothing of an unfavorable nature in an analysis of the conditions of today."

Melvin A. Taylor, President First National Bank, Chicago, First Vice President of the association, said: "The total volume of business in the Chicago district for the first quarter of 1926 was certainly in excess of the volume for the first quarter of 1925. In recent weeks there has been, however, some complaint of hesi-

tancy and decidedly more pronounced show of strength by the buyers; that is, it is considered decidedly a buyer's market. Producers in such cases naturally complain of competition and reduced margins of profit. The public, as a whole, are apparently not particularly disturbed by the debacle of the stock market, preferring to accept the break as an evidence of reaction from an overtraded condition."

Francis H. Sisson, Vice President Guaranty Trust Company, New York, President of the Association's Trust Company Division, believes "The effect of the stock market decline has naturally been to unsettle opinion respecting the future. It is heightened by weakness in prices of commodities. The question raised is whether the market is forecasting business conditions and indicates a need for added caution. On the whole, it may be said that recent business developments have been fairly reassuring. Those who predict a decline in business later in the year base their contentions on the belief that production cannot be maintained at present high levels, that building activity must decline, that foreign trade factors are unfavorable, that real estate speculation and instalment buying have resulted in some degree of inflation, and that the psychology of a depressed stock market will affect general business. Most of the indices of business activity and prospects, however, are favorable and developments generally are satisfactory."

Norway Honors Viggo Drewsen

A radiogram announcing the election of Dr. Viggo Drewsen, of New York, as an honorary member of the Royal Norwegian Scientific Society was received here last Monday.

Dr. Viggo Drewsen, who is retained as a technical expert by the West Virginia Pulp and Paper Company, was born in Copenhagen, Denmark, April 13, 1858. He received his early education at the Technical College in Trondhjem, where he afterwards taught as professor of chemistry for a period of six years. He pursued his studies at the University of Bavaria and was graduated Ph.D. (*summa cum laude*) in 1882. At the University he acted as assistant to Prof. Adolf Bayer in his private laboratory, and it was here in 1883 that Drewsen made the synthesis of indigo, which attracted world-wide attention at the time.

As a youth Drewsen served as an assistant to Prof. Remegius Fresenius in the Fresenius Laboratory at Wiesbaden. While associated with Fresenius, Drewsen wrote his first scientific paper relating to a method for the determination of zinc in zinc dust, which is still the standard method, as reference to the *Chemiker Kalender* will show.

After leaving the Technical College in Trondhjem, Drewsen turned to technical pulp and paper manufacture and formed a connection with the Boehnsdalen Mills at Boen near Oslo. The firm manufactures sulphite pulp and standard news print paper on a large scale.

Dr. Drewsen has taken out numerous patents covering improvements in pulp and paper manufacture, most of which have been assigned to the West Virginia Pulp and Paper Company, with which firm he has been connected for many years.

Raises $2,000,000 For New Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., April 29, 1926—Sherman M. Miles has returned from a trip to the Middle West where he announces that he raised $2,000,000 for a wood pulp paper plant to be built soon. Mr. Miles was formerly president of the Columbia County Bank, St. Helens. The site for the new mill will be announced as soon as selection is made. Mr. Miles was instrumental in helping finance the paper plant now being erected at St. Helens, and he expresses great faith in the paper business for the West.

Major Porter Investigating European Conditions

In the furtherance of the policy of the American Paper and Pulp Association to maintain friendly contact with manufacturers of pulp and paper in Europe, and to keep itself accurately informed of developments in the manufacture of pulp and paper abroad, and forest conditions, Major O. M. Porter, assistant secretary of the association, sailed recently for two months in Europe.

Major Porter's first stop was made in Rome, where he is representing the association at the International Forestry Congress which is being held there this week. From Rome, Major Porter will turn back into France to visit some of the forests producing pulp wood and some of the paper plants. Incidentally, he will again go over some of the woods operations of which he had charge during the war as a Captain of Engineers.

From France, Major Porter will go up through western Germany, stopping at Aschaffenburg to visit mills in the vicinity of Aschaffenburg and Frankfort, and then, after a brief visit to the Black Forest, he will go on to Berlin, and from Berlin as his center, will visit a number of typical forests in northern Germany, and some of the pulp and paper mills and machinery plants.

About May 30, Major Porter will reach Oslo in Norway, stopping enroute at several pulp and paper mills and machinery manufacturing centers in western Sweden. From Oslo, Major Porter will go to Trondhjen, thence turning eastward across Sweden to the pulp and paper mills north of Stockholm. From Stockholm, Major Porter will then go to Finland, again visiting pulp and paper mills and seeing simewhat of forest conditions. The return trip will be made on the new Swedish-American steamer *Gripsholm*.

One of the most interesting and significant features of Major Porter's trip abroad, is the large number of requests which have come to the association from members of the American Paper and Pulp Association and from various affiliated associations, and members of the Supply and Equipment Association. Upon assembling these requests, which cover the entire field of the pulp and paper industry from the forest to the market, the association found that if Major Porter is to get information upon one-third of the requests, it will require his presence in Europe for at least six months instead of two months. The diversity of requests indicates the keen interest of the industry in conditions abroad, and emphasizes the desirability of the American Paper and Pulp Association having a representative visit various pulp and paper sections of Europe regularly.

Soon after his return to the United States late in June, Major Porter is planning to get out a series of reports covering the sections which he visited, and the inquiries from the different associations, and these will be sent to members of the association and to members of the Supply and Equipment Association.

Swedish Pulp Firms Increase Dividends

WASHINGTON, D. C., May 5, 1926.—The good business enjoyed by pulp manufacturers in Sweden during 1925 is reflected in slightly increased dividend payments. These without doubt would have been even higher if losses had not been encountered in the lumber and iron producing branches of a number of the companies. In anticipation of an increase in the present heavy demand for wood pulp the productive capacity of the mills is being expanded either by the construction of new mills or the enlargement of present facilities. Most of the new capacity, however, will not be operative until 1927. Sales of chemical pulp are reported to comprise 60 per cent of the bleached sulphite, 85 per cent of the unbleached sulphite, and 90 per cent of the sulphate of the 1926 production with contracts also placed for 275,000 metric tons (approximately 20 per cent present capacity) of the 1927 output. Sales of mechanical ground wood are also progressing at a satisfactory rate.

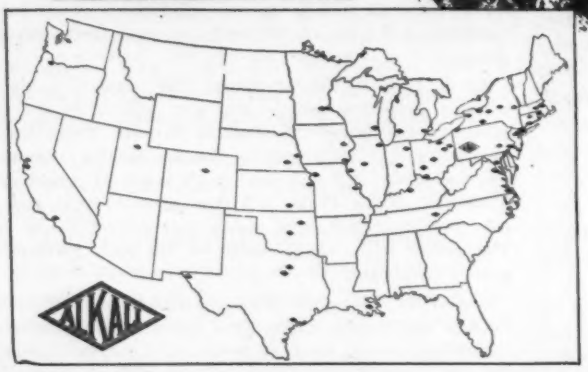
As near as your telephone

Diamond Alkalies

(include)

58% Soda Ash
(Guaranteed over 99% pure)
76% Caustic Soda
(Guaranteed actual test 76%)
Bicarbonate of Soda
(U. S. P. and Commercial Grades)

MODIFIED SODAS
SPECIAL ALKALIES

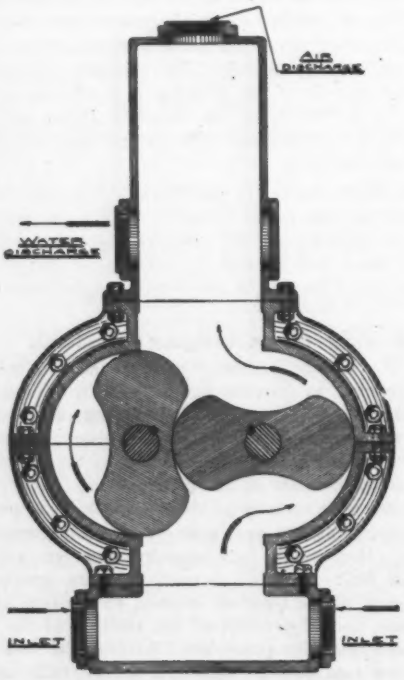


For the convenience of the less carload buyer—substantial stocks of Diamond Alkalies are maintained at logical points throughout the country.

Regardless of the quantity you may use—the best is available quickly and economically.

Diamond Brand offers quality, uniformity and neighborly service—tell us your requirements and we will advise you of the nearest local distributor.

Diamond Alkali Company
Pittsburgh Penna.



Positive Suction
will speed up
Production

The action of the impellers of a Connersville Cycloidal Vacuum Pump cause it to produce a *positive suction.* It is impossible for the impellers to rotate without drawing air into the pump. Consequently, as the paper covers the inlets to the suction rolls or flat boxes, the vacuum becomes higher, because of the "pull" from the action of the impellers, drawing the moisture away more quickly.

You can turn this *positive suction* to your advantage in increasing the production of your machines.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Atmospheric Conditions for Paper Testing

In preparing the proposed official Association methods for various tests of paper, the atmospheric conditions for paper testing, involving the conditions of relative humidity during the tests, were considered by the committee. On this subject a Minority Report has been presented by E. O. Reed, a member of the Committee, who favors recommending the adoption of 50 per cent relative humidity and temperature of 70 to 75 degrees F., instead of 65 per cent relative humidity and temperature of 75 degrees F., with temperature tolerance of 18 degrees F., as recommended by the committee.

Herewith is published Mr. Reed's Minority Report followed by the Majority Report of the Paper Testing Committee.

Members are urged to read both of the reports carefully, as they will be called upon to cast their ballots on the subject in the early future.

(Signed) W. G. MacNaughton,
Secretary, TAPPI.

Minority Report of Tappi Paper Testing Committee

Reference is made to the action of the Sub-Committee of the Paper Testing Committee of the Technical Association of the Pulp and Paper Industry on physical tests, relative to standard atmospheric conditions for paper testing. As a member of this subcommittee I cannot agree with the recommendation of 65 per cent relative humidity and 75 degrees F. temperature with a tolerance of 18 degrees F. in temperature, and desire to submit the following report, recommending for standard testing conditions a relative humidity of 50 per cent and temperature of 70-75 degrees F.

The Paper Specifications Committee of the Joint Committee on printing, after a thorough investigation, adopted in December, 1923, for paper testing conditions a relative humidity of 50 per cent and temperature of 70 to 75 degrees F. This was done after a condition of 65 per cent relative humidity and 70 degrees F. temperature had been used for several years previous to December, 1921.

The Paper Technical Committee of the Federal Specifications Board, January 16, 1925, adopted for paper testing conditions, 50 per cent relative humidity and 70 degrees F. temperature.

The Executive Committee of the Federal Specifications Board at their meeting April 7, 1925, unanimously adopted the recommendations of the Paper Technical Committee of the Federal Specifications Board for paper testing conditions of 50 per cent relative humidity and 70 degrees F. temperature.

Between forty and fifty million pounds of paper, covering practically every kind and grade manufactured, are purchased annually by the Public Printer on specifications based on these testing conditions, covering the requirements of the Government Printing Office and for the use of the Departments and independent establishments of the Government in the District of Columbia. The specifications, including the conditions of testing, are submitted anuually to more than 700 paper makers and dealers. During the fall of 1924, the Paper Specifications Committee of the Joint Committee on Printing submitted the paper specifications to more than 400 paper makers and dealers for comments and suggestions. Not a single objection to the testing conditions of 50 per cent relative humidity and 70 to 75 degrees F. temperature has been received from any paper manufacturer or dealer. The Government is the largest purchaser of paper using definite specifications for quality.

During the current year paper has been furnished to the Government Printing Office by more than 60 different paper mills manufacturing various kinds and grades of paper, from news print to the highest grades of ledger, and in no instance has any objection been raised relative to the standard testing condition of 50 per cent relative humidity on which the specifications are based. The specifications for more than 10,000,000 pounds of bond, ledger, map and writing paper on the 1925-26 schedule, include folding endurance specifications which test must be made under definitely specified atmospheric conditions.

No logical reason for the selection of such a high relative humidity as 65 per cent has been offered. In the adoption of standard atmospheric conditions for testing paper or any other material, it is essential that a careful study should be made of the actual use and service required and under what atmospheric conditions the material must be satisfactory. Paper or any other material should be tested under conditions where a direct comparison may be made between the tests obtained and the actual serviceability. These conditions must be set so as not to favor the material, but to place it under average conditions, or possibly under more severe atmospheric conditions than it must be exposed to and under which it must be handled.

The Testing Section of the Government Printing Office, during the past year, has secured considerable reliable information relative to indoor conditions which fully sustain the data previously published. Recording temperature and humidity instruments were installed in the press and bindery divisions of the Government Printing Office, which sections were not equipped with any humidifying apparatus for increasing the humidity of the air. Therefore, the data secured furnishes information as to the normal indoor relative humidity and temperature in any building in Washington or this vicinity. These instruments were checked at regular intervals with accurate sling psychrometers. The following brief table gives the monthly average, maximum and minimum relative humidity and average temperature for the twelve months. A full detailed report is being prepared for publication.

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	Bindery	Pressroom	Outdoor
Average temperature for year	77.4°F.	80.7°F.	56.1°F.
Maximum temperature for year	92.0°F.	94.0°F.	
Minimum temperature for year	63.0°F.	66.0°F.	
Average relative humidity for year	34.2 %	36.1 %	63.2 %
Maximum relative humidity for year	72.0 %	79.0 %	
Minimum relative humidity for year	11.0 %	12.0 %	

* Government Printing Office results are the average of readings taken at 9:00 A. M. and 4:00 P. M. daily.
** Outdoor results from U. S. Weather Bureau Reports, and are the average of readings taken at 8:00 A. M., Noon, and 8:00 P. M. daily.

Data were also secured from several commercial plants in various parts of the country which checked those secured by the Government Printing Office. Sections of the country which require the longer use of artificial heat have a lower normal indoor relative humidity than warmer climates. From the data in hand the average relative humidity indoors varies from 35 to 45 per cent, according to geographical location. Therefore, a standard humidity testing condition of 50 per cent relative humidity is more in harmony with actual conditions under which paper is used than a relative humidity of 65 per cent.

The purpose of paper testing and paper specifications is to secure an indication as to the quality, serviceability and probable durability of paper, in order to assure the consumer that he is obtaining the most suitable paper for the use to which it is to be put. There is no question but that the largest quantity of paper is used and handled indoors. Paper is printed, handled and read, documents and correspondence are prepared, handled and filed, bundles are wrapped, and envelopes and bags are filled and sealed under the conditions prevailing indoors, and the paper meeting requirements under such conditions will the more certainly prove satisfactory at higher conditions of humidity to which it may be subjected. However, paper tested at a high relative humidity will not necessarily be satisfactory at lower humidity conditions under which most of it is used.

Giving careful consideration to all of these facts, together with considerable other data, the Paper Testing Committee of the Joint Committee on Printing adopted a standard testing condition of 50 per cent relative humidity and a temperature of 70 to 75 degrees F. In addition to the Government Printing Office, the Bureau of Chemistry, Department of Agriculture, and several mill laboratories are now conducting paper tests under atmospheric conditions of 50 per cent relative humidity.

The fact that foreign countries and about six laboratories in this country are testing at 65 per cent relative humidity is no reason for continuing to do so when that condition is not representative of the conditions under which paper is used in this country. There are approximately 900 paper mills in the United States and only about six of these mills make any attempt to test under controlled temperature and humidity conditions. Therefore, most paper mills are conducting paper tests under normal indoor conditions.

It has been suggested that the humidity in paper mills is higher than in other commercial buildings and plants. It is true that in the "paper machine room" the humidity is higher than in most commercial buildings, due to the presence of moisture being removed from the web of paper by the driers. However, the paper does not contain an amount of moisture corresponding to the humidity of the machine room. Nor does paper remain in the machine room for any length of time, nor is it handled under this condition except in rolls. The atmospheric conditions in those portion of the mill in which paper is handled after leaving the "machine room" are the same as those in other commercial plants handling paper. Several paper mills have found it necessary to install humidifying apparatus to facilitate the handling of paper and overcome difficulties caused by low humidity, the same as printing and lithographing plants. These mills are maintaining a controlled relative humidity of approximately 45 to 50 per cent in their cutting, plating, finishing and sorting rooms. Commercial printing and lithograph plants which have installed equipment for increasing the relative humidity of their work rooms are maintaining conditions of 35 to 55 per cent relative humidity. During winter months it has been found practically impossible to secure and maintain over 50 per cent relative humidity.

Paper is bought and paid for by weight. Therefore, it is of vital concern to all interested parties that laboratory tests should be made under atmospheric testing conditions which will furnish results bearing a definite relation to the billed or actual weight of the paper as received. Results in past years at the Government Printing Office when tests were conducted at 65 per cent relative humidity have conclusively proved this point. Frequent and unjustified deductions were made on account of overweight when tests were conducted at 65 per cent relative humidity. Results secured during the past four years show that 50 per cent relative humidity is closer to the actual moisture content of the paper as received.

It is a well known fact that papers in actual service do not stand up in direct proportion to laboratory test values at 65 per cent relative humidity. This is especially marked in regard to folding quality, which, when considered with the other tests, is most indicative of the serviceability, durability, and quality of the paper. All papers exhibit a better folding quality at 65 per cent relative humidity, very few being unsatisfactory at this unusual condition. Yet some papers which are satisfactory at 65 per cent relative humidity are brittle and even unserviceable at normal indoor conditions. It is paramount, therefore, that a testing condition be selected which will give results most indicative of the real properties of the paper when in use.

From a wide experience with paper testing, especially as to folding quality, whether obtained by a folding endurance tester or by hand, it has been very definitely found that the effect of relative humidity or of temperature is not the same on all kinds of paper, or even on papers of the same grade or manufacture. This fact has been shown by other investigations to be true also of other physical tests. Hence, no factor can be used in calculating any physical test from results at one condition to equivalents at another, or to a standard condition, and comparative ratings of papers at one atmospheric condition will not be the same at another condition.

The Testing Section of the Government Printing Office operates day and night, continuously throughout the year, a testing room maintaining uniform atmospheric conditions of 50 per cent relative humidity and 70 to 75 degrees F. without difficulty. For the purpose of reducing temperature and dehumidifying, iced drinking water of a temperature between 45 and 50 degrees F. has been found entirely satisfactory during the short periods of the year

YEARLY RECORD OF MONTHLY TEMPERATURES AND RELATIVE HUMIDITIES
GOVERNMENT PRINTING OFFICE—WASHINGTON, D. C.

1925

1925 MONTH	BINDERY DIVISION—Folding Section * Temperature °F Avg.	Max.	Min.	Relative Humidity Avg.	Max. per cent	Min.	PRESS DIVISION—Main Pressroom * Temperature °F Avg.	Max.	Min.	Relative Humidity Avg.	Max. per cent	Min.	OUTDOOR** Temperature Average °F.	Relative Humidity Average per cent
January	73.2	76	70	20.1	28	11	80.9	86	75	23	35	16	32.3	67.3
February	76.1	88	72	26.5	39	19	81.3	88	74	29.2	41	18	42.7	64
March	No Records						79.6	88	73	30.6	46	20	46.7	61.3
April	78.6	92	72	28.1	43	17	78.3	89	69	34.4	49	20	54.3	56.6
May	78.6	86	63	29.5	40	21	80.6	91	72	34.6	51	23	62.7	57
June	82	92	74	31.5	44	17	84.3	94	78	34.9	48	21	79	59
July	No Records						82.7	94	76	39.3	55	25	77.7	64.7
August	79.8	90	71	56.6	72	44	81.6	90	71	35.6	66	41	71	68
September	77.5	90	72	58	72	46	80.9	90	66	56.8	79	45	72.7	68.7
October	75.3	79	72	38	58	16	79.3	87	73	43.9	63	26	53	68.3
November	76.6	79	72	25.6	35	13	80.1	85	75	22.3	31	12	44.7	63
December	76.6	81	72	28.2	35	19	78.9	85	74	28.2	37	18	37	61

when this is necessary. This installation is entirely commercial and not unreasonable in cost. From reliable information obtained from engineering companies, it has been found that the cost of installing and maintaining a 50 per cent relative humidity and 70 to 75 degrees F. temperature is the same or less than that for 65 per cent relative humidity at 70 to 75 degrees F. temperature. This is contrary to statements made in defense of 65 per cent relative humidity.

Relative to the temperature for standard testing conditions, the Government Printing Office Testing Section has maintained 70 to 75 degrees F. temperature with entire satisfaction and without difficulty. For commercial testing a tolerance of 10 degrees F., 70 to 80 degrees F., would probably be satisfactory, but for standard testing conditions a tolerance of not over 5 degrees F. is recommended. Paper tests involving the measuring of absorption of various liquids, penetration of various printing inks and oils, and for measuring sizing effects, require careful consideration of temperature.

Even though the Technical Association adopts a standard humidity condition of 65 per cent relative humidity, it is doubtful whether the Government would be willing to adopt it and change from its present testing condition of 50 per cent relative humidity, owing to the results now being secured in the purchase and testing of paper. In view of my experience in testing paper during the past four years in the Government Printing Office, under an atmospheric condition of 50 per cent relative humidity and 70 to 75 degrees F., I would not recommend changing to the high and abnormal testing condition of 65 per cent relative humidity. No logical arguments for the use of 65 per cent relative humidity have been offered. A most cordial and satisfactory cooperation has been secured with paper manufacturers with present testing conditions.

E. O. REED,

Chief of Tests, Government Printing Office.

Majority Report of TAPPI Paper Testing Committee

This report refers to the minority report of Mr. E. O. Reed, "On Atmospheric Conditions for Paper Testing." The previous committee on paper testing, TAPPI, made a thorough study of the arguments advanced for adopting a humidity condition of 50 per cent for paper testing. All interested were invited to submit what data they had bearing on the question and the subject was thoroughly discussed at the several meetings of the association. That committee recommended after its study of the question that the standard condition of 65 per cent relative humidity be retained by the association, as the evidence in favor of 50 per cent relative humidity was not sufficient to warrant departure from the established standard. The present committee agreed with this decision and believed that further discussion of the subject was unnecessary at the present time as all members of the association had been through the previous discussion thoroughly informed of the facts involved. But in view of the statements contained in the minority report it seems desirable to repeat the reasons for recommending adoption of 65 per cent relative humidity as an official testing condition.

A humidity of 65 per cent is the standard condition for paper testing. It is so recognized in all countries which have established standards for paper testing. These countries include France, Germany, Switzerland, Belgium, England, Canada, and the United States. Many years ago Germany established very thorough specifications for purchase of paper for Government use and definitely specified the methods of test. That country has continuously used 65 per cent relative humidity. This condition is used and regarded as standard by the following institutions, all of which have made thorough study of paper testing as it is one of their principal functions:

Government Materials Testing Laboratory, Berlin-Dahlem, Germany.

Forest Products Laboratory, Montreal, Canada.

Papermaking School of Grenoble, Grenoble France.

Forest Products Laboratory, U. S. Department of Agriculture, Madison, Wisconsin.

The Bureau of Standards, U. S. Department of Commerce, Washington, D. C.

A survey of the humidity conditions used by American industrial concerns for testing paper was recently made by the American Engineering Standards Committee. Out of a total of 22 concerns replying, ten used 65 per cent relative humidity and two 50 per cent relative humidity, the rest not using controlled humidity. All the American commercial paper testing laboratories having controlled humidity used 65 per cent relative humidity. The Technical Association of the American Pulp and Paper Industry adopted this condition as a standard in 1922. There can be no question that 65 per cent relative humidity complies with the definition of standard—"an established measure of value." This being the case, the burden of proof as to desirability of departing from this standard falls on those proposing such departure. It is felt by the present committee, that the data offered in support of adopting 50 per cent relative humidity are not sufficient to indicate such desirability. Following is a review of these data:

Respecting the statement that there is no logical reason for the selection of such a high relative humidity, it would seem that this condition on the contrary is a very logical one to adopt. This is the average outdoor humidity, and therefore, is a fixed natural condition. The argument for lower humidity is based largely on the statement that the average indoor humidity is less than this. It is doubtful if this holds good in general as indoor humidity is bound to be an extremely variable quantity considering the varying conditions under which paper is handled indoors and the varying climate in different geographical locations. Indoor humidity in paper machine rooms for example, would no doubt average at least 65 per cent, and in most cases the paper would have sufficient time to practically reach equilibrium with this condition. The indoor humidity in warm, humid climates would tend to balance with the outdoor humidity. In any case, it would seem rather doubtful if more paper is used indoors than outdoors. While possibly a higher proportion of the fine papers are used indoors, the opposite is true of wrappings and boards, the total tonnage and value of which are similar to those of the fine papers.

It is believed to be questionable in any case if paper must be tested under the humidity condition at which it is used. The instruments used to measure the strength of paper do not exactly reproduce the particular strains to which the paper is subjected in use. These instruments simply offer a convenient means of obtaining various strength data by means of which the actual resistance of the paper to the strains incident to usage can be predicted. The Bureau of Standards has used 65 per cent humidity for testing paper since the inception of its paper laboratory, and has made considerable study of the effect of humidity on the physical strength testing of paper. Its experience is that the resistance of paper to wear in usage can be accurately gaged at this condition. Its published data indicate that considering any certain kind of paper, when the strength figures are shown graphically, papers of similar composition give similar types of curves. This shows that no matter what humidity is used the relative values of various papers of the same type will be the same at different humidities. These are the only values necessary, for any product must always be tested for value relative to a standard value. If conversions from one humidity to another are not valid, then 50 per cent relative humidity is no more valid than 65 per cent, as the average indoor humidity is claimed to be 35 to 45 per cent. A consideration of the available data on tests made at different humidities, these including those published by the Government Printing Office, by Miss H. U. Kiely of the American Writing Paper Company, and by the Bureau of Standards, show very little greater error in converting readings obtained at 35 per cent relative humidity to those obtained at 65 per cent, than in converting them from 35 per cent to 50 per cent. Considering the

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wide fluctuations always present in folding test results, it is even doubtful if what difference there is in error is a real one.

If paper is tested at any fixed humidity and its performance is known under the usual humidity conditions of usage then the test strength value and the actual strength value shown in usage can readily be correlated no matter what the actual humidity at which the paper is tested may be. It is only important to have a fixed condition generally agreed upon.

It seems entirely logical to believe that 65 per cent relative humidity, this being the average natural humidity, can be maintained more easily and at less expense than 50 per cent relative humidity. It is certainly less expensive to humidify than to dehumidify.

Another consideration in favor of 65 per cent is that this is the standard for textiles. A number of Government and commercial testing laboratories use the same air conditioned room for testing both kinds of materials. This is true also of a number of industrial laboratories. Obviously with different standard humidities for textiles and for paper, it would be necessary in such cases to maintain two separate testing rooms.

The committee believes, therefore, that paper can be correctly evaluated as far as service in use is concerned at any humidity condition not abnormal, that as hygroscopic materials in general are tested at 65 per cent relative humidity and as this is a natural condition and therefore easily maintained, there should be no departure from this generally accepted standard.

B. W. SCRIBNER, *Chairman*,
Paper Testing Committee, TAPPI.

Pulp Grinder Load Regulation

R. H. Rogers, Industrial Engineering Dept. General Electric Co.

Continuous feed magazine woodpulp grinders are usually driven in pairs by synchronous motors. This type of motor, though of comparatively low speed, has the extremely high full load efficiency of approximately 96 per cent in the two grinder sizes besides having leading power factor that enables the mill to take full advantage of rates that are based on the highest power factor. Constant speed is inherent with this type of drive, and hence one of the variable factors in pulp grinding is eliminated to the end that more uniform pulp may be produced. Constant load on the synchronous motors is desirable to help toward uniformity of product; to operate at highest efficiency; to prevent peak loads that would affect power rates, and to prevent valleys in the load curve indicating power paid for but not used.

Constant load on the synchronous grinder motor is obtained by varying the speed of the caterpillar feed chains that force the logs against the grindstones. The General Electric load control system includes the following parts: (1) A 3-hp., shunt wound, direct current motor on each grinder for driving the feed chains through speed reducing gears. (These motors make about 3000 revolutions for each foot of travel of the columns of logs toward the stones). (2) A motor generator for furnishing direct current for the feed motors. (3) A panel mounting the necessary control, regulating and recording instruments.

The system has several functions:

(a) It holds constant predetermined and adjustable load on the synchronous grinder motor.

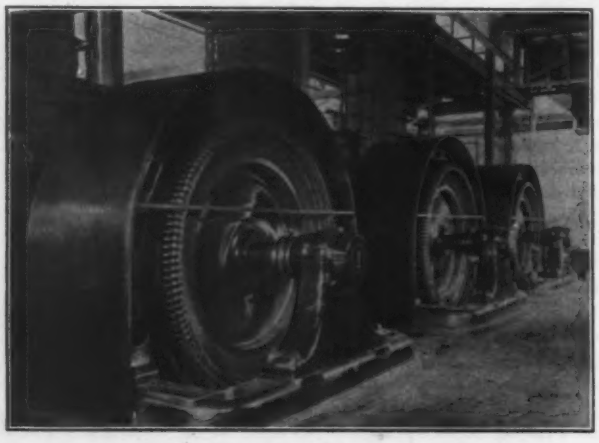

FIG. 1

General Electric synchronous motor driving Warren magazine wood pulp grinders under automatic load control.

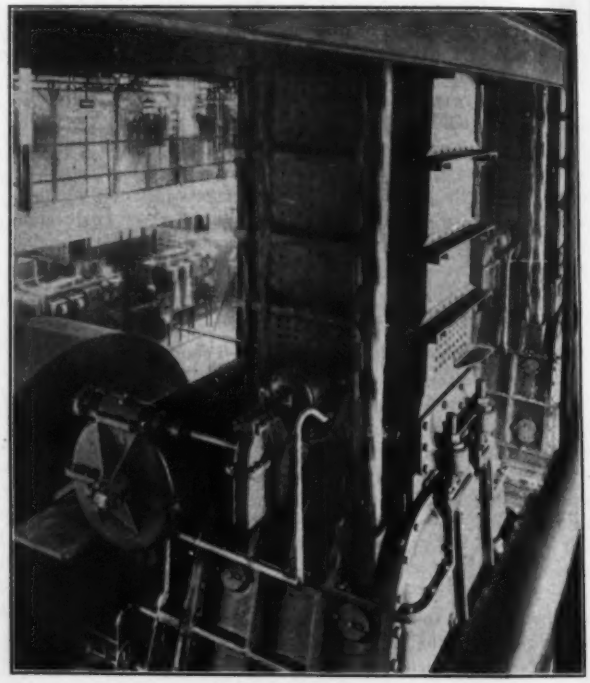

FIG. 2

Three horse power 900 r.p.m. shunt wound direct current motors feeding Warren magazine wood pulp grinders. The feed chains move about four inches per minute. The automatic control panels and one of the motor generator sets show in the background.

(b) It provides for holding constant predeterimined part load on the grinder motor when one stone only is grinding.

(c) It provides means for practically equalizing or dividing the load as desired between the two stones when they are of unequal size or quality of grinding surface.

(d) It indicates unusual load conditions on either stone as might be caused by dullness, jamming of wood, etc.

(e) It makes it possible to back wood off the stones to allow starting the grinder motor without load.

(f) It provides for raising the magazines clear of the stones for inspection or replacement of the stones.

(g) It makes a continuous graphic record of the amperes load on both feed motors and the grinding motor.

A current transformer in the grinder motor lines operates an adjustable damped wattmeter element in such a way as to vary a

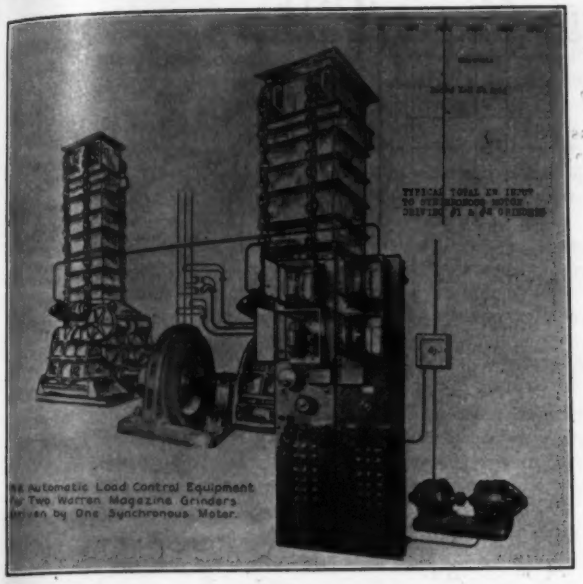

FIG. 3

Composite illustration of a 2400 horse power 240 r.p.m. General Electric synchronous motor driving two Warren magazine wood pulp grinders with automatic load control. A typical grinder motor load curve for six hours is shown.

rheostat in the field of the d. c. generator. This varies the voltage in the feed motor circuit and, consequently, the speed of the feed motors. An increase in grinder motor load decreases the feed motor speed thus bringing the grinder motor load back to normal. Conversely, a decrease in grinder motor load speeds up the feed motors with like correction. In regular operation the feed motors vary widely and rapidly in loads and speeds in order that the grinder motor load may be kept constant within 1 or 2 per cent.

Either feed motor may be stopped and the one still running can be adjusted to maintain the predetermined part load on the grinder motor.

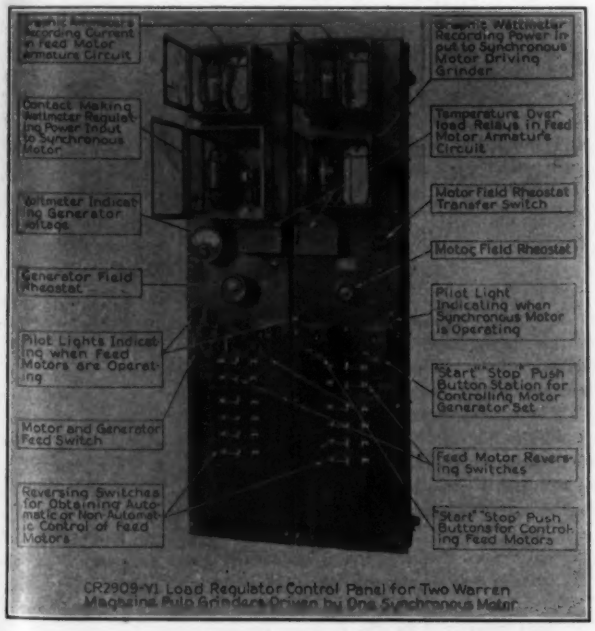
Recording Current in Feed Motor Armature Circuit
Contact Making Wattmeter Regulating Power Input to Synchronous Motor
Voltmeter Indicating Generator Voltage
Generator Field Rheostat
Pilot Lights Indicating when Feed Motors are Operating
Motor and Generator Feed Switch
Reversing Switches for Obtaining Automatic or Non-Automatic Control of Feed Motors
Graphic Wattmeter Recording Power Input to Synchronous Motor Driving Grinder
Temperature Overload Relays in Feed Motor Armature Circuit
Motor Field Rheostat Transfer Switch
Motor Field Rheostat
Pilot Light Indicating when Synchronous Motor is Operating
"Start" "Stop" Push Button Station for Controlling Motor Generator Set
Feed Motor Reversing Switches
"Start" "Stop" Push Buttons for Controlling Feed Motors
CR2909-Y1 Load Regulator Control Panel for Two Warren Magazine Pulp Grinders Driven by One Synchronous Motor

FIG. 4

Explanatory picture of the Cr-2907 Y1 load regulator control panel showing the functions of the various instruments and devices.

A feed motor field rheostat with transfer switch can be thrown into either feed motor field so that the relative loads on the stones can be adjusted as desired, and this predetermined load ratio is maintained thereafter. While the feed motor load curves vary widely and frequently, the average line can be easily noted, and any tendency of either feed motor load to increase can be detected and will usually indicate that the stone is dull or that there is unusual friction in the mechanism.

Either motor can be thrown from automatic to hand control for either direction of rotation thus providing means for raising and lowering the magazine under perfect control following the proper make-ready operations on the magazine.

By operating the feed motors in the reverse direction under hand control, the logs can be backed off the stones so that the synchronous grinder motor can be started without load. The feed motor control is interlocked with the grinder motor control in such a way that the logs cannot be fed down unless the stone is running. Line drawing wattmeters with paper rewind attachments maintain a running graphic record of the loads on both feed motors and the grinder motor so that unusual conditions are at once noticeable and performances can be checked over long periods.

Wherever this load control system is being used, it is giving very successful service and operators are pleased with its simplicity and with the convenience that it affords in the operation of wood pulp grinders.

Thirty Additions to TAPPI Membership

J. S. Bates, Bathurst Company, Ltd., Bathurst, N. B.

W. M. Bovard, Chemical Paper Manufacturing Company, Holyoke, Mass.

E. L. Branson, Jr., Michigan Carton Company, Battle Creek, Mich.

C. N. Candee, Jr., Lincoln Pulp and Paper Company, Ltd., Merritton, Ont.

Noel Cunningham, Hardinge Company, Inc., York, Pa.

G. J. Druckerman, Kimberly-Clark Company, Niagara Falls, N. Y.

F. W. Farrell, McLaurin-Jones Company, Brookfield, Mass.

D. I. Gross, Du Pont Rayon Company, Old Hickory, Tenn.

Gosta Hall, Albemarle Paper Manufacturing Company, Richmond, Va.

T. H. Ireland, Crane Company, New York, N. Y.

C. A. Jobson, New York and Pennsylvania Company, Lock Haven, Pa.

H. E. Karberg, Lincoln Pulp and Paper Company, Ltd., Merritton, Ont.

C. T. Leander, Dorr Company, New York, N. Y.

A. G. Lewis, Fort Howard Paper Company, Green Bay, Wis.

R. W. MacGregor, Ernest Scott & Co., Fall River, Mass.

E. K. Mansfield, Muirhead & Mansfield, New York, N. Y.

F. A. Naegeli, R. T. Vanderbilt Company, New York, N. Y.

J. J. Nylund, General Dyestuffs Corporation, Chicago, Ill.

S. R. Olsen, Northwest Paper Company, Cloquet, Minn.

C. W. Perry, Esleeck Manufacturing Company, Turners Falls, Mass.

R. F. Reed, University of Cincinnati, Cincinnati, Ohio.

C. F. Richter, Vera Chemical Corporation, Stoneham, Mass.

J. D. Robb, Dominion Engineering Works, Ltd., Montreal, Que.

Erik Serlachius, G. A. Serlachius A/B., Mantta, Finland.

F. A. Soderberg, Continental Paper and Bag Mills Corporation, Rumford, Me.

J. E. Taylor, Howard Smith Paper Mills, Ltd., Cornwall, Ont.

M. J. Taylor, Hoberg Paper and Fibre Company, Green Bay, Wis.

L. A. Thompson, Paper Makers Chemical Company, Holyoke, Mass.

A. S. Viger, Munising Paper Company, Munising, Mich.

F. A. Wettstein, Ruths Accumulator Company, Inc., New York, N. Y.

Nu-Process Egg Case Fillers

By Sidney D. Wells

In the storage of eggs as practicel in the United States and Canada, egg case fillers play a very important part, and it is mainly due to the effective design of the better grades and the physical properties of the material from which they are made that only an insignificant proportion of the eggs carried therein are broken in transit or storage. If the storage egg reached the consumer with its flavor as slightly impaired as it has suffered physically, there would be little cause for complaint except perhaps, from the producers of "strictly fresh" eggs whose main stock in trade is the objection of the public to the stale flavors encountered in storage eggs.

The causes for stale flavors are probably many, some inherited, some caused by conditions on the farm or during the period between the leaving the farm and arriving in cold storage, and some due to environment in storage. By some the egg case filler has been blamed for a large share of the trouble. Whether there is any relationship between the filler and the taste of the storage egg has never been established, but to meet this criticism, some packers have used fillers made from fresh, spruce groundwood pulp even though the extra expense is considerable with prospects of becoming more and more so as the demands of the newspaper manufacturers become constantly greater and the stands of spruce scarcer and more remote.

While the filler manufacturers believe that much of the blame placed on strawboard fillers is not justified by facts, they realize the economic waste from the standpoint of the nation in diverting from straw, which otherwise would be a waste, to spruce groundwood pulp, for which the demand already far exceeds the supply. Consequently they acted through their association, The National Association of Egg Case and Egg Case Filler Manufacturers, in financing some investigations at the Forest Products Laboratory, Madison, Wisconsin, to ascertain whether straw could not be converted to board which would not in any way be responsible for flavoring eggs stored therein.

These investigations[2] gave results so promising that four of the leading manufacturers established the Paper Mill Laboratories, Inc., at Quincy, Illinois, to carry on the work still further, and supervise the introduction of the improved board into their various plants.

Preparing for the Test

The first shipments of fillers made from the improved board, which will be designated hereafter as "Nu-Process' strawboard, were sent to egg packers in Nebraska, Kansas, and Missouri, and six lots of 400 cases each, and one lot of 10 cases were placed in cold storage together with similar eggs in old process (lime cooked straw) fillers, and white, spruce groundwood fillers. These eggs were packed in April and May, 1925 with one exception, which was packed in June. All of the packings in old process or white fillers were made in April and May, 1925. The eggs were stored in cold storage warehouses of the standard, brine cooled type, distributed as follows:

Number of lots	Kind of Filler used	Distribution
1	Nu-Process	Warehouse A, St. Louis
1	Nu-Process	B, St. Louis
1	White	C, St. Louis
1	Nu-Process	D, Omaha
	Old Process	E, Omaha
1	Nu-Process	F, Chicago
2	Nu-Process	G, Chicago
1	Nu-Process	H, Chicago

Eggs in old process fillers were stored in the same rooms with the Nu-process fillers in every case except one, and outnumbered them in ratios of from about 14:1 to over 60:1. The exception was Warehouse D, in which the new process fillers were in a room with white fillers. In all the warehouses the temperature was kept at 30° or 31° F. and the relative humidity within the range of 80 to 85 per cent. No special precautions were observed, and they were subjected to the conditions usually encountered in well managed, good, cold storage warehouses.

Late in October the condition of the market was such that it might prove desirable to sell the lots of eggs on trial at short notice, and Howard C. Pierce, formerly with the U. S. Department of Agriculture in charge of many of the poultry and egg studies conducted by the Food Research Laboratory, was engaged as a competent and impartial judge to observe and report upon the condition of the eggs and fillers. Observations were made on October 23 and 24 in St. Louis, October 26 and 27 in Omaha, and October 28, 29, and 30 in Chicago. The conditions under which the observations were made and the results obtained as stated by Mr. Pierce in his report are given below:

How the Observations Were Made

"In order that the observations made of each lot of eggs could be as comparable as possible, a definite procedure was adopted. In each lot the eggs examined occupied definite locations in the cases and the cases in turn were located in particular positions in the stack in the storage room. The positions of the eggs were selected so as to give a cross section of the case and the cases were located so as to examine the top, center, bottom and edges of the lots as they were stacked in the storage rooms.

"Each egg was marked with a double number the first numeral of which represented the case location and the second numeral the situation of the eggs in the case."

The same system was used in sampling each lot of eggs so that the same case number and egg number would indicate the same relative position.

"Observations were also made as to the condition of the rooms in which the cases of eggs were stored.

"After removal from the stacks in the storage rooms the cases under observation were taken to the candling room in the storage warehouse and opened immediately before any sweating of the eggs could occur. On opening, the cases were examined for odor and appearance of fillers and flats and presence or absence of mold on eggs and fillers.

"As the eggs to be examined were removed from the cases they were numbered, observed before the candle and then replaced in fillers removed from the cases in which the eggs were stored and allowed to warm up over night at ordinary room temperatures. The eggs were allowed to warm up in the fillers in which they were stored in order to approximate commercial conditions and to allow the fillers to affect the quality of the eggs if such an occurrence takes place.

Eggs Examined for Odor and Taste

"The next day after removal from storage, the eggs were soft boiled and examined for odor and taste. This procedure was varied in the case of lots 28676 (Nu-Process Fillers) and 28626 (Old Process Fillers) as these eggs were removed from storage in the morning and tasted in the afternoon of the same day.

"The eggs were soft boiled by placing about fifteen of them at a time in about two quarts of boiling water and allowing them to remain therein for five to six minutes with the heat turned off. This caused the whites to be partially coagulated and the yolks to become thoroughly warmed through, but not hardened. This also brought out the flavor of the egg to a high degree. After the eggs were removed from the water, they were stood up on the smaller end in cupped flats. Then the shell of the large ends were removed by cutting with a sharp blow of a knife, and the contents examined by the persons present as to the odor of the egg.

"The examination for taste consisted of stirring the contents

[2] See "A New Method of Cooking Straw for Strawboard" by John D. Rue and William Monsson, Paper Trade Journal, Vol. 81, No. 15, page 52-53 and No. 20, page 49.

of the egg while yet in the shell with a glass rod or small metal spoon and tasting the yolk while warm. Each observer had a separate rod or spoon which was wiped with tissue paper after tasting each egg. The decisions of the observers as to taste and odors were recorded in Tables 1, 2, and 3[1]. No taste record was made in regard to the albumen as there was no apparent variation in taste therein.

"Especial care was taken to mingle the eggs from the various lots so that it was impossible for any of the tasters to know the filler history of any egg.

"All the eggs examined in St. Louis were tasted by Miss Zerban of the St. Louis Refrigerating and Cold Storage Company and Messrs. Wells and Pierce.

"In Omaha all the eggs were tasted by Donald Howe of the Fairmont Creamery Company and H. C. Pierce.

"In Chicago complete tasting was done by G. E. Mayhew of Swift and Company and Messrs. Wells and Pierce.

"At all the places other people aided in the tasting of some of the eggs. Especial credit is given Miss Zerban, and Messrs. Howe and Mayhew for this aid as it was in no sense obligatory on their part and the careful tasting of from sixty to seventy-five eggs in one examining period is not an easy task."

TABLE 4
RECAPITULATION OF TASTE RECORD

Kind of Fillers	Lot No.	Number of Eggs	Very Strong No.	Very Strong %	Strong No.	Strong %	Faint No.	Faint %	Sweet No.	Sweet %
Nu-Process Fillers	5375	15	0	0	1	6.7	3	20	11	73.3
	1293	15	0	0	0	0	3	20	12	80.0
	1273	9	0	0	0	0	2	22.2	7	77.8
	14054	9	1	11.1	0	0	5	56.6	3	33.3
	14471	15	0	0	1	6.7	1	6.7	13	86.6
	116	15	0	0	2	13.3	2	13.4	11	73.3
	28676	15	0	0	0	0	0	0	15	100.0
Egg totals and %		93	1	1.1	4	4.3	16	17.2	72	77.4
Old Process	5373	15	1	6.7	3	20.0	3	20.0	8	53.3
	1273-A	5	0	0	1	20.0	0	0	4	80.0
	14094	10	2	20	1	10.0	7	70	0	0
	14052	15	3	20	1	6.7	3	20	8	53.3
	127	15	0	0	1	6.7	2	13.3	12	80
	1259	15	1	6.7	0	0	5	33.3	9	60
	28626	14	0	0	0	0	4	28.6	10	71.4
Egg totals and %		89	7	7.9	7	7.9	24	26.9	51	57.3
White Spruce	2864	15	1	6.7	2	13.3	2	13.3	10	66.7
	104	15	0	0	0	0	3	20.0	12	80

Discussion of Observations and Data

Appearance Before The Candle

"It was hoped that definite comparisons could be made between the eggs packed in various kinds of fillers as to shrinkage and firmness of albumen and yolk. It was very apparent, however, after some candling had been done that these comparisons could not be made because the qualities of the eggs in each lot were not known when they were placed in storage. That the entering qualities must have been widely varying was plainly seen in the wide range of shrinkage and firmness of the bodies of the eggs when candled at the time of their examination.

"The qualities of eggs ranged from poor to excellent irrespective of the kind of filler in which they were packed. No especially bad lots were found, however, and all the eggs selected for examination were free from stuck yolks or other evidences of inedibility as determined by candling. They also had clean shells.

"To determine the effect of cold storage and the different types of fillers on the eggs as detected by candling would require that the eggs be carefully graded at the time of storage and the same eggs graded during and at the end of the storage period.

"The records of the appearances of the various lots before the candle are not included in this report as it is felt that the descriptions would be of so little correlative value as to tend to confuse the reader rather than furnish a true basis for any logical deductions.

Odor and Taste

Eggs in Nu-Process Fillers Stay Sweet

"The taste of the yolk of the eggs only is considered in this table, as it was found that correlation between the odor and taste of the opened eggs was so slight as to be of no practical value. As previously mentioned the albumen of the eggs had no taste variations.

"This table shows that the ranges and average percentages of absolutely sweet normal tasting eggs in the various kind of fillers were as follows:

	Minimum %	Maximum %	Average %
Nu-Process, strawboard	33.3	100.0	77.4
Old Process, strawboard	0.0	80.0	57.3
Spruce groundwood	66.7	80.0	73.4

"Considering the 'very strong' tasting eggs and 'strong' tasting eggs together or, in other words, those eggs that would be definitely classed as having a decidedly noticeable 'storage taste' when eaten as a soft boiled egg, the New Process fillers showed 5.4 per cent, the Old Process fillers 15.8 per cent, and the White fillers 10.0 per cent.

"Thus there were nearly three times as many strong tasting eggs in the old process fillers and nearly twice as many in the white fillers as in the Nu-Process fillers.

"Even though the comparisons of the Nu-Process fillers and the old process fillers show outstanding results in favor of the Nu-Process strawboard as regards the flavor of the eggs stored in them, it is well to remember that with the exception of Lot 116, all of the lots of Nu-Process fillers were stored in rooms containing old process fillers and furthermore, that the Nu-Process fillers were outnumbered by at least twenty-five to one by the old process fillers. *If the No-Process fillers had been stored in rooms by themselves the probabilities are that the Nu-Process fillers would show up yet more favorably."*

Fillers, Flats and Pads

Strength of Fillers—Nu-Process Fillers are strongest, both before and during storage period.

"One outstanding feature of the Nu-Process strawboard fillers is not only its greater initial strength but that it maintains its superiority in strength over both old process strawboard and spruce pulp fillers during the storage period.

"In all the lots examined the Nu-Process strawboard fillers were stronger than either the old process strawboard or the spruce fillers with which they were compared. This is especially true as regards the tips of the fillers where they come in contact with the ends and centers of the cases.

"The old process strawboard fillers were often bent, twisted and broken at the tips and the white spruce fillers had the tips broken off due to the brittle nature of the material from which they were made. The Nu-Process strawboard fillers, however, were rigid and firm and prevented the sides of the fillers from coming in contact with the ends, sides and centers of the cases in all lots examined.

"The Nu-Process strawboard was also much stronger, tougher and maintained its straightness of edge and flatness of surface in the center of the filler much better than the old process strawboard. The old process strawboard seemed to crumple and bend in all directions and was very easily torn and damaged. The Nu-Process strawboard on the other hand did not crumple but remained tough and leathery and regained its stiffness on drying.

"The straighter line of edge of the white fillers is probably due to their greater thickness. They were, however, much softer and more easily torn than the Nu-Process strawboard fillers not only as to tips but also as to the body of the fillers themselves, when examined under storage conditions. It would be interesting to note how the two kinds of fillers would compare in their ability to protect eggs during shipment after removal from the cold storage warehouse.

Strength of Flats—Nu-Process Flats are superior.

"The greater strength and toughness of the Nu-Process strawboard as compared with the old process strawboard, spruce pulp and chipboard was as easily demonstrated in the flats as in the fillers.

"Even under the most moist conditions Nu-Process strawboard flats maintained their strength and toughness. White spruce flats and old process strawboard flats both lost sufficient

[1] Summary of Tables 1, 2, 3, given in Table 4.

strength under storage conditions to permit the eggs to make dents in the flats.

Not All Flavors Caused by Fillers

"From the results of the tasting examinations it is evident that old process strawboard fillers do possess certain properties that cause a deterioration in the taste of eggs in cold storage. Whatever these properties are, it is also evident that they can be detected by the odor of the fillers after several months in storage. In all fairness it should also be mentioned that the peculiar, sharp, lasting and sometimes nauseating taste developed in eggs is not due entirely to the cases, fillers or pads as now used. If this were the situation it would be impossible to find perfectly sweet normal tasting eggs in the same case and adjacent to those of a very strong objectionable flavor. Indications are very strong that some eggs, at least, possess properties that render them very susceptible to deterioration in storage and that the methods of packing and storing are only contributing factors.

"Certainly the wide variations in taste of eggs that are stored under identical conditions of packing, fillers, flats, pads, cases, temperatures and humidities indicate the necessity of some properly equipped agency or agencies undertaking to solve the problem of the causes of these variations. If the poultry is to reach its highest point of efficiency in supplying the consumer with a wholesome article of food, the deterioration in taste during the cold storage must be entirely eliminated.

"Furthermore, under these conditions of variability in individual eggs does it not seem unfair that the term "cold storage" as used in this report and by the people in general should be used to designate the peculiar unsavory flavor commonly associated with cold stored eggs. If this flavor were due entirely to methods used in cold storage and methods of packing more eggs should be affected than occur at present. If it is not a necessary result of cold storage some other terms should be applied to it.

Egg Breakage

"There was so little damage from mashed or cracked eggs in any of the cases of eggs examined that no definite figures could be obtained as regards the value of the different kind of fillers, flats and pads observed as regards egg breakage. It was readily apparent, however, as has been previously mentioned, that the strongest filiers and flats were those made of Nu-Process strawboard."

Results of a Later Test

Suggestions were made by some that the eggs under observation had not been in storage long enough for flavor to develop, and that another month would show different results. It happened that on December 22d, two lots of eggs in the Nu-Process fillers were still in storage—one lot in Warehouse F, and one lot in Warehouse G. Consequently on December 22, and 23, Mr. Pierce made a second examination of these lots together with two lots in old process fillers for comparison. The results of these inspections taken from his report are as follows:

RECAPITULATION OF TASTE RECORD—LATER TEST

Kind of Fillers	Lot No.	Number of Eggs	Very Strong No.	Very Strong %	Strong No.	Strong %	Faint No.	Faint %	Sweet No.	Sweet %
Nu-Process	1273	15	0	0	0	0	2	13.3	13	86.7
	5375	15	0	0	0	0	7	46.7	8	53.3
Tota's and %		30	0	0	0	0	9	30.0	21	70.0
Old Process	1272	15	0	0	1	6.7	5	33.3	9	60.0
	5373	15	0	0	3	20 0	4	26.7	8	53.3
Totals and %		30	0	0	4	13.3	9	30.0	17	56.7

"These examinations after the eggs had been in storage practically eight months confirm the examinations made on the same lots of eggs made two months previously.

"They show that 70 per cent of the eggs packed in Nu-Process were sweet as compared with 56.7 per cent in old process fillers.

"The Nu-Process strawboard also maintained its superiority in strength and rigidity."

In addition to Mr. Pierce's work a number of moisture determinations were made on the various types of fillers after they had come to equilibrium in the cold storage room at 80 per cent relative humidity and 31° F. The moisture contents found averaged as follows:

Filler	%
Nu-Process	18
Old Process	16
Spruce	22

The old process fillers were limp and weak notwithstanding their lower moisture content. The Nu-Process fillers were tough and leathery, and maintained their stiffness much better than either of the other fillers. The ends of the fillers especially maintained their alignment and gave much more protection to the eggs than the limp and broken ends commonly encountered in the other types. The spruce fillers were limp, weak and soggy even though a sized board was used. They had lost their original stiffness and water resistant qualities. The greater power of the spruce filler to absorb water and the softer and bulkier nature of the board, and greater capillarity of the ground wood fibers would tend to cause a greater shrinkage in the eggs stored therein than either of the other types.

The data given in the preceding pages would definitely indicate the following points:

1. The proportion of sweet eggs in each of the various types of fillers under observation after six or seven months storage were as follows:

	Minimum %	Maximum %	Average %
Nu-Process	33.3	100.0	77.4
Old Process	0.0	80.0	57.3
Spruce	66.7	80.0	73.4

2. The unpalatable eggs found in the various types of fillers occurred as follows:

	Minimum %	Maximum %	Average %
Nu-Process	0	13.4	5.4
Old Process	0	30.0	14.9
Spruce	0	20.0	10.0

RECAPITULATION OF TASTE RECORD

3. Figured as eggs per case of thirty dozen, the dealer could expect on the average to obtain six dozen more sweet eggs in Nu-Process fillers than in old process fillers, and one more than in white fillers.

On the other hand, there would average three dozen less unpalatable eggs in Nu-Process fillers than in old process fillers, and over one dozen less than in spruce fillers.

The increased value of the eggs would show substantial returns on the slight increase in the cost of the Nu-Process fillers over old process fillers. At the same time a saving both in eggs and cost of fillers would occur when submitted for spruce fillers.

4. The perfect record of 100 per cent made by one lot packed in Nu-Process fillers would indicate that carefully inspected eggs packed in these fillers and stored under good commercial cold storage conditions will come out of storage at the end of seven or eight months in perfect condition.

5. The greater toughness and stiffness of the Nu-Process fillers is very much more marked under actual storage conditions than in the filler factory, warehouse, or office and would undoubtedly show substantial savings in eggs broken in transit or handling. The more perfect condition of the ends of the Nu-Process fillers is especially noticeable.

The greater power of the spruce filler to retain moisture, the greater bulk of the sheet, and the greater capillarity of the ground wood fibers, would tend to increase the shrinkage of the eggs stored therein, and encourage the growth of mould.

Corporate Membership

The Oil Paper Manufacturing Company, Tokyo, the largest papermaking company in Japan, has taken corporate membership in the Technical Association of the Pulp and Paper Industry. Last year Itsuki Nishi, manager of Jujo Mill, traveled extensively in the United States and Canada, later spending several weeks in Europe before returning home. The manufacturing practice in Japan is entirely modern and in addition to making news and wrapping paper the mills are now making the chemical pulps.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

By Clarence J. West, Chairman

Raw Materials

The Protection of Wood Against Rot. Anon. Papierfabr. 23, 607-608 (Sept. 20, 1925). Descriptive of chemical methods for the preservation of wood recommended by the Forest Products Laboratory (U. S. A.) and of a high vacuum drying oven for protection against rot.—J. L. P.

Eucalyptus As a Source of Pulp. F. Hoyer Papierfabr. 23, 509-510 (Aug. 9, 1925). The different species of the eucalyptus tree are suitable for pulp production owing to their rapid growth and easy cultivation. No yields are given.—J. L. P.

Paper Making Woods of Other Dominions. Pulp and Paper 23, 1101-1103 (Sept. 24, 1925). A discussion of the suitability for pulping of the most important woods of Australia, New Zealand, and India.—A. P.-C.

Chemical Studies of the Pulping of Aspen. F. G. Rawlings and J. A. Staidl. Paper Trade J. 81, No. 8, 49-51 (Aug. 20, 1925); Paper Ind. 7, 901-904 (Sept., 1925). A number of cooks were made with caustic soda and sodium sulphite solutions, respectively, on aspen wood which had been extracted to remove the resins. Cooking for 4 hours at 120° to 140° C. with about 52 per cent or more of sodium sulphite gave slightly greater yields of cellulose than with smaller proportions of sodium sulphite. This is due to formation of compounds which resist solution during the analytical manipulations. Hydrolysis of cellulose increases with the temperature, and is very marked above 170° C. Caustic soda removes substances other than lignin and cellulose from the wood below 140° C., and sodium sulphite exerts this action only at 170° C. or over. When less than 17 per cent (on the wood) of lignin is removed, caustic soda dissolves out much more cellulose than sodium sulphite; but when more than 17 per cent of lignin is removed sodium sulphite dissolves out more cellulose than caustic soda.—A. P.-C.

Pulp from Different Parts of the Tree. Erik Hägglund. Paper Trade J. 81, No. 2, 45-47 (July 9, 1925). See Pulp and Paper 23, 1159 (Oct. 8, 1925); Paper Trade J. 81, No. 14, 60 (Oct. 1, 1925).—A. P.-C.

Australian Wood Pulp Investigations. Pulp and Paper 23, 1153-1154 (Oct. 8, 1925). Brief account of research work carried out in Australia on the possibility of manufacture of pulp and paper from Australian hard woods.—A. P.-C.

Recent Research on the Use of Straw. Pulp and Paper 23, 1151-1152 (Oct. 8, 1925). Brief outline of the possibilities of the Bache-Wiig process for pulping straw, more particularly from the standpoint of the industrial development of the Prairie Provinces of Canada.—A. P.-C.

Cotton Stalks as Paper Making Materials. M. B. Shaw, G. W. Bicking and R. R. Rumsey. Paper Trade J. 81, No. 5, 50-51 (July 30, 1925). Pulping and paper making test on both laboratory and semi-commercial scales showed that the material requires severe chemical treatment and relatively long cooking. The yield of fiber was fairly good, being 35 to 40 per cent of the weight of shredded stalks, but the paper produced was deficient in strength and of poor appearance, being suitable only for low grade wrapping or board. On the basis of cost of collection, quality of paper produced, and yield of fiber obtained, the results indicate that cotton stalks are not a practical paper making material.—A. P.-C.

Esparto as a Paper Making Material. M. B. Shaw, G. W. Bicking and R. R. Rumsey. Paper Trade J. 81, No. 12, 55-56 (Sept. 17, 1925). Laboratory and semi-commercial pulping tests were carried out on esparto "semi-pulp" now available on the American market. Best results were obtained with 5 per cent of caustic (on the weight of grass), and the fiber contained was appreciably stronger than soda pulp and approached sulphite in strength. In order to obtain a clean sheet, free from specks and shives, it was necessary to clean the pulp mechanically before cooking. The laboratory cooks (without dusting) gave 73 to 75 per cent yields, and the semi-commercial cooks (with dusting) gave 57 to 63 per cent yields.—A. P.-C.

Bamboo and Grasses for Paper Pulp. W. Raitt. World's Paper Tr. Rev. 84, 562-568, 618-620 (Aug. 21, 1925). A detailed description of Raitt's "fractional" boiling process for the pulping of bamboo and grasses with a discussion of its merits. It consists essentially in a preliminary treatment with a weak soda solution to remove starch, gums, sugars, tannin, coloring matter, resins, fats and waxes, followed by a treatment with stronger liquor to remove the lignin, the waste liquor from the "lignin-digestion" being used to effect the "pre-digestion" of the next batch. With sabai grass the ordinary process required 15 per cent soda on grass weight, 4 hours steaming at 145° C. (45 lb. pressure), and 6 per cent of bleaching powder on grass weight, and it gives 1500 gal. of spent liquor at a density of 5.5° Tw. per ton of grass; while the fractional process requires 11.5 per cent soda, 3.5 hours steaming at 136° C. (32 lb. pressure) and 1.75 per cent of bleach, and gives 900 gal. of spent liquor at 11° Tw., and a 2 per cent higher yield of bleached pulp. Similarly, with bamboo, fractional boiling reduces soda consumption from 21 per cent to 15 per cent, cooking temperature from 162° C. (80 lb.) to 140° C. (38 lb.), bleach consumption from 10 per cent to 5 per cent, and spent liquor from 1600 gal. at 6° Tw. to 1000 gal. at 10.5° Tw., and the yield of bleached pulp is increased 3 per cent. Practical hints are given on the preparation of bamboo for pulping, more particularly as regards splitting and crushing, and "seasoning" under water to remove a considerable proportion of its starchy constituents which facilitates molding and attacks by insects.—A. P.-C.

Treatment of Worn Impregnated Fabrics for Conversion into Paper Pulp. A. C. F. Chevalier. Fr. pat. 592,692, Jan. 5, 1925. Waste textiles containing tar, paints, varnish, etc., are boiled with dilute alkali solutions, the nature and strength of the alkali and boiling temperature being varied according to the nature of the fibers and of the material to be eliminated. After draining off the alkaline solution, the material is washed with water or with acid, and may be bleached if desired.—A. P.-C.

Process of Deinking Paper. E. Kellner. U. S. pat. 1,555,674, Sept. 29, 1925. The waste paper is pulped at about 75° C., soda ash is added and the stock is heated to about 90° C., and mixed, bleaching powder and sulphur are added and the stock is again beaten for a short time, and it is finally washed.—A. P.-C.

Process of Deinking Paper. R. W. Stutzke. U. S. pat. 1,545,707, July 14, 1925. The paper to be deinked is agitated in a solution of sodium silicate and of sodium bicarbonate, and then washed to remove these salts from the stock.—A. P.-C.

Sulphite Process

Researches on the Chemistry of Sulphite Pulp Cooking. E. Hägglund. Pappers-Och Travarutid for Finland, Nos. 23, 24 (Dec. 31, 1924); Pulp & Paper 23, 1175-1177 (Oct. 15, 1925).

TECHNICAL SECTION, PAGE 234

A review of the principal results of the author's researches on the composition of spruce wood and on the mechanism of sulphite cooking.—A. P.-C.

Chemistry of the Sulphite Process. Studies of the Acid Hydrolysis of Wood. R. N. Millerler and W. H. Swanson. Ind. Eng. Chem. 17, 843-847 (Aug., 1925); Paper Trade J. 81, No. 11, 53-57 (Sept. 10, 1925). The same amounts of carbohydrates are removed from wood by mild hydrolysis with hydrochloric acid as are removed by sulphite digestion, which reduces the lignin content of the residue below 2 per cent. These carbohydrate materials are removed, in part at least, as complex bodies that can be further hydrolyzed to reducing sugars. The time of lignin removal by the sulphite reaction is reduced approximately one-half by each 10° increase in temperature between 120° and 150° C., and by a change in acid concentration from 1 to 3 per cent. The tendency of salts of strong acids added to the cooking liquor is to increase the rate of reaction, and for those of weak acids to decrease the rate of reaction, suggesting that the process is dependent upon hydrogen-ion concentration.—A. P.-C.

Ionic Reactions in the Sulphite Pulp Cooking Process. E. Oeman. Svensh Papers-Tid. 28, 81-84, 106-110; Papierfabr. 23, 445-448 (July 12); 483-486 (July 26); 510-513 (Aug. 9, 1925). The reactions occurring during the cooking process are discussed from the standpoint of the electrolytic dissociation theory. The rate of solution of the wood incrustations is dependent not only on the HSO_3 ion concentration but also on the H ion concentration. The Ca ion concentration has a definite influence on the course of the cooking process and increases in amount as the cooking progresses. Weak sulphonic acids cannot combine with Ca or neutralize lime in the presence of bisulphite, but remain as free acids. The lime acts as a buffer and keeps the H ion concentration within certain limits.—J. L. P.

Alfthan-Serlachius Method. Manufacturing White Sulphite Cellulose from Resinous Woods. Paper Trade J. 81, No. 8, 52-53 (Aug. 20, 1925). Description of the results obtained in the course of commercial tests of the process at Montech, France. Cooking resinous (3.2 to 5 per cent resins) *Pinus maritimus* for 14 1/3 to 15 1/2 hours gave 35.7 per cent good pulp and 6.1 per cent knots and screenings. The pulp was made into various grades of paper (including greaseproof) both alone and with waste paper, and no pitch trouble was encountered on the paper machine. The papers were of satisfactory quality.—A. P.-C.

Alfthan-Serlachius Process. Paper Ind. 7,771-773 (Aug. 1925). Description of the process and discussion of its merits as compared with ordinary sulphite cooking.—A. P.-C.

Ritter-Kellner or Mitscherlich. H. Moerbeck. Paper 35, 622-624 (Jan. 29, 1925). See Paper Trade J. 81, No. 4, 54 (July 23, 1925).—A. P.-C.

Notes on Sulphite Cooking. Bergoo. Pulp & Paper 23,481-482 (April 20, 1925). See Paper Trade J. 81, No. 4, 44 (July 23, 1925).—A. P.-C.

Manufacture of Sulphite Pulp and By-Products. C. F. Cross U. S. Pat. 1,547,907 (July 28, 1925). The wood is cooked with an aqueous sulphurous acid solution to which has been added a calculated small proportion of ammonia.—A. P.-C.

Digester Control in Pulp Making. R. H. Moerbeck. Paper 35, 360-362 (Dec. 18, 1924); Paper Ind. 7, 242-244 (May, 1925). See Pulp and Paper 23, 862 (July 30, 1925).—A. P.-C.

Pyrites Containing Selenium. L. Wolkoff. Bum. Prom. (Russia), No. 2 (1925); Zellstoff U. Papier 5, 355-356 (Sept., 1925). Selenium in pyrites acts catalytically on the sulphur dioxide produced to form sulphur trioxide. The removal of this catalyzer by suitable washing of the gas is discussed. Pyrites from the Ural Mountain region contain 20 g. selenium per ton.—J. L. P.

The Solubility of Sulphur Dioxide in Calcium Disulphite Solutions Up to 100° C. and Certain Practical Considerations. Enckell. Pappers Och Trävarutid. for Finland, No. 4, 93-99 (1925); Papierfabr. 23, 633-636 (Oct. 4, 1925). The solubilities of sulphur dioxide in water, in calcium bisulphite solutions of different concentrations, in 6.8 per cent sulphuric acid solution, and in 7.5 per cent sodium sulphate solutions are given for 40 to 90° C. at intervals of 10° and at atmospheric pressure. Its solubility is somewhat less in an acid or salt solution. Graphs are shown indicating the relations between the concentration of free sulphur dioxide in cooking acid and the pressure of the gas above the solution, and also the relations between the gaseous sulphur dioxide, water vapor and air at different temperatures and acid concentrations under one atmosphere pressure. To decrease losses of sulphur dioxide in waste gases, the latter should be introduced into cooking acid by means of an ejector. Filling a digester at the bottom with cooking acid is more economical than filling at the top. Steaming of the digester brings the sulphur dioxide loss down to a minimum.—J. L. P.

Sulphite Pulp Digesters. M. Bergoo. Zellstoff U. Papier, 5, 303-304 (Aug. 1925). Brief descriptions, with drawings, of vertical and horizontal digesters both for direct and indirect heating.—J. L. P.

The Fresk Method for Filling Digesters. E. Belani. Wochbl. Papierfabr. 56, 1068-1073 (Aug. 29, 1925). The Fresk method of steaming filled digestors is described. Depending on the amount of moisture in the wood, the steaming process enables more chips to be added to the digester and the acid penetration is improved. The steam consumption per ton of pulp is decreased and a more concentrated waste sulphite liquor is available for alcohol manufacture. In sulphate pulp mills less heat is required to evaporate the waste liquor. A table of mill data, giving actual results with the Fresk process is included.—J. L. P.

Heat Relations in the Sulphite Pulp Process. R. Sieber. Wochbl. Papierfabr. 56, 911-914 (July 25); 932-935 (Aug. 1); 1056-1059 (Aug. 29); 1177-1183 (Sept. 26, 1925). The concluding articles of a series on the heat relations in the sulphite pulp digestion process (the entire series is now available in book form). A comprehensive mathematical treatment of the steam consumption and heat losses in the digestion of wood pulp by both the direct and indirect methods.—J. L. P.

Heat Problems in the Sulphite Pulp Process. R. Sieber, Zellstoff U. Papier, 5, 304-306 (Aug., 1925). An abstract of a portion of the series of articles appearing in Wochbl. Papierfabr. on heat relations in the sulphite process.—J. L. P.

Pitch Troubles in Paper Making. J. Enckell. Wochbl. Papierfabr. 56, 1184-1185 (Sept. 26, 1925). Compare C. A. 19, 3160 (1925).—J. L. P.

Investigations on the Reddening of Sulphite Pulp. E. Haegglund and E. O. Hedman. Papierfabr. 23, 574-578 (Sept. 6, 1925); Svensk Papers-Tid. No. 8 (1925). Previously abstracted from Zellstoff U. Papier, 5, 258-260 (1925).—J. L. P.

Indicators for the Pulp Industries. E. Oeman. Pulp & Paper 23, 981-984 (Aug. 27); 1011-1012, 1016 (Sept. 3); 1035-1036 (Sept. 10); 1059-1060 (Sept. 17, 1925). In the analysis of *sulphite liquor*, the determination of combined sulphur dioxide is best carried out by titrating with standard alkali in presence of brom-phenol blue (which gives half-bound SO_2, i. e., titrates to $NaHSO_3$). Good results are also obtained by titrating in presence of thymolphthalein (which gives a titration to complete neutralization, i. e., to Na_2SO_3); but the brom-phenol blue titration is preferable, as it is practically unaffected by the weak acids introduced into the cooking liquor by the relief gases and relief liquor. In the analysis of *white liquor* caustic alkalinity is best determined by titrating with standard acid in presense of Nile blue as indicator, and sulphide by titration with standard iodine in presence of starch (Na_2S is considered as consisting of NaOH+NaHS, so that the caustic alkalinity titration includes half the Ha_2S). If the sodium carbonate content is required, an additional titration should be carried out with standard acid in presence of thymol blue, and a control of all the above determinations can be obtained by titrating with standard acid in presence of bromphenol blue. The above results are deduced from a consideration of the sensitiveness of the above and other indicators for different ranges of hydrogen ion concentrations, and were verified by tests on solutions of known strength which are described in detail.—A. P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Business Hazards from the Credit Point of View*

By Freas B. Snyder

Perhaps it should be said at the outset, in justice to the speaker, that he did not pick this, somewhat formidable, topic. It was handed to him. And, grasping it firmly with both hands, he finds himself in somewhat the same position as a certain colored gentleman, party of the first part in a recent neck-tie festival. Someone had pinned to the remains, as they swung in the wind, a slip of white paper on which was scrawled the legend "E Pluribus Unum." The surrounding crowd read and wondered, shifting from one foot to the other as they were swayed by the unaccustomed mental processes in an endeavor to guess the meaning of the unfamilar words. Came the colored preacher, repository of the learning and culture of the settlement. "Parson," one asked, "what am the meaning of them words?" The preacher read and faltered, for he knew less of Latin than of ancient Sanskrit and that was nothing at all. But his prestige and influence were in the balance, and with corrugated brow and scholarly mien he cleared his throat and said "Hm! 'E Pluribus Unum?' Well, a free translation of them words means, 'He's in a hell of a fix!'"

Business Failures Over Fifty Years

The great merchantile agency of the Bradstreet Company has made a study of business failures, including their causes, for over fifty years. It is these causes which constitute the business hazards from a credit viewpoint.

For our purpose these causes may be divided into four groups, with the percentage of the total number of failures in the United States in 1925 after each cause:

1—THE MORAL HAZARD—	
Extravagance	1.9%
Neglect	1.3%
Speculation	.2%
Fraud	3.3%
	6.7%
2—THE CAPACITY HAZARD—	
Incompetence	36.9%
Inexperience	4. %
Unwise Credits	1.3%
	42.2%
3—THE CAPITAL HAZARD—	
Lack of Capital	33%
4—THE ETERNAL HAZARD—	
Failures of others	1.3%
Competition	2 %
Specific Conditions	14.8%

The moral hazard is the fundamental consideration in credit granting. Shade it and you are flirting with a loss. Ignore it and you are plunging in a gamble which makes backing the ponies look like buying Liberty Bonds. The small part it plays in the total of failures is not a measure of its importance but rather a tribute to the morality of American business men.

Fraud Most Important Cause

The most important of the four causes of failure grouped under the moral hazard, both numerically and actually, is fraud. It accounted in 1925 for 615 failures with total liabilities exceeding $20,000,000. The damage caused by fraudulent failures is far greater than the momentary loss. The business of this country is absolutely dependent on credit. The basis of credit is confidence. Every fraud perpetrated in a credit transaction shakes this confidence. It breaks the warp in the delicate credit fabric, woven with such pains and effort by the shuttles of commerce.

These considerations prompted the National Association of Credit Men to create its million dollar Credit Protection Fund for the investigation, prosecution and prevention of commercial fraud.

Any analysis of business hazards would be incomplete and fruitless without a discussion of the avoidance or their remedy. Happily as to the fraud hazard, the cure is largely in our control. There are two principal contributory causes for such failures: First. The undue emphasis in our business organizations on sales volume, regardless of results. Second. Careless, inefficient, slipshod, indifferent credit investigation.

A mercantile agency manager, calling on a client recently, was shown an order for $250 which the merchant gleefully announced had come in by wire, unsolicited. The agency man recognized an old offender, who, having forty-one known aliases and a jail record, had the effrontery to use his own name. The merchant asked him what he thought of it and was somewhat disconcerted by the emphatic warning to stay off or prepare for a loss. It might in fact be said that he resented it. His final word as the agency man left was "Well, two hundred fifty dollars is a big order to turn down." Even the method indicated the wise old hand at the game for by sending in a telegraphic order. he avoids any possibility of an eventual charge of using the mails to defraud.

A Typical Case

The Quaker Bedding and Supply Company, let us say, is the trade name for an old-established business with an honorable record for twenty years. It is located at 35th and Diamond streets. Under the Fictitious Name Law of Pennsylvania it has registered the title and partners in the county records. A man with years of experience in planning bankruptcy frauds, looks up the rating, finds it to be thirty-five to fifty thousand, first-grade credit, rents a store at 315 Diamond street, adops the name Quaker Bedding and Supply Company, and sends out requests for samples

*An address before the wholesale section, Wilmington Chamber of Commerce, Wilmington, Del.

and prices. He may even register the title if he likes, for the county officials have no authority to refuse registration even though there be a dozen like names.

An order reaches a credit man who isn't onto his job. He looks at the rating book, finds the amount is reasonable in relation to the estimated worth, relies on the old fallacy that "they always pay for the first order" and passes the credit. He does not know that his name is on the carefully compiled "sucker list" maintained by the well-organized and capably managed professional bankrupts as one who invariably ships first orders on the rating.

Possibly he goes a little further before making a decision and consults a list of references, voluntarily furnished by the customer. Such references are usually either reputable concerns with which the crook has built up a favorable experience record by making small purchases and discounting his bills with the sole purpose of referring to them or they are dishonest houses of some standing who are paid in cash or a percentage of the merchandise for replying to inquiries. A western creditor of a questionable business in an eastern city had been furnished with three references with an initial order. He uses a form letter of inquiry which only requires the filling in of the name of the subject. Three forms were addressed to the names furnished but through error the name of the concern being inquired about was omitted. Nevertheless the return mail brought three letters, high in their praise of a man whose name did not even appear in the inquiry.

A crook adopting the name of "Adams Mills" rented an office at the same number on East Second Street as the number of the reputable and well-rated Adams Mills on West Second Street and gave the bank of the good company as a reference. The bank was addressed in a credit investigation and failing to note the difference in address gave the crook a fine send-off. The deception was only discovered when the credit officer of the bank, asking his customer if he received the goods learned that he never bought from the inquirer and an investigation followed.

A Nose for Commercial Crime

The credit investigator, twenty-five of whom are in the employ of the National Association of Credit Men, has a nose for commercial crime which sets him apart from the usual detective. If one of his connections on the outer fringe of legitimate business does not tip him off to the fake Quaker Bedding and Supply Company, chances are his trained eye will promptly detect the unusual activity which marks such operations. A little quiet investigation confirms his suspicions that a new scheme is in the making. Goods are coming in steadily and going out just as rapidly. Truck numbers are recorded, routes traced, hiding places spotted, freight stations watched, consignors' names listed.

Do these seem like ineffective measures to you? Just what would you do? Nine times out of ten you will answer, "Send 'em to jail." Oh! if it was only as simple as that. What crime has been committed? You cannot swear out a warrant for arrest without alleging a crime and if you cannot prove your allegations a right smart damage suit is laying for you just around the corner.

Five Criminal Charges Possible

There are only five criminal charges possible for the prosecution of the usual commercial fraud and none of these can be invoked as a practical matter, until bankruptcy ensues.

First, there is making a false financial statement to obtain credit, a State offense, where the Uniform False Statement Act has been adopted.

Second, using the mails to defraud by sending a false statement by post, a comparatively recent interpretation of the Federal penal statute, originally aimed at get-rich-quick schemes.

Obviously, these two charges do not lie until a loss results and proof requires access to the books which is not possible as long as they remain in the possession of the maker of the statement.

Third, obtaining goods under false pretenses used in States which do not have a false statement law and as a conspiracy charge in Federal cases involving two or more.

Fourth, concealing assets from a trustee in bankruptcy.

On filing of a petition in bankruptcy the Court appoints a Receiver who is charged with certain duties of conservation and appraisal until the cause has been tried, if contested, or adjudication entered if there is no denial and the creditors hold their first meeting and elect a trustee, usually a matter of six weeks. By a peculiar quirk in the Bankruptcy law, it is a crime for the bankrupt to conceal any of his assets from the Trustee but not from the Receiver.

Fifth, perjury.

Difficult to Prove Charge

Here is a charge which can only be brought for falsification under oath, usually in a legal proceeding and most often in examinations under Section 21-A of the Bankruptcy Act.

There are your five charges. Can you bring any of them against the Quaker Bedding and Supply Company, remembering that they have made no claim to being the old established concern of the same name at 35th and Diamond streets? If you do bring a charge, can you prove it? And yet you know beyond a reasonable doubt that a fraud is being perpetrated. The proprietor may sell every pound or perch or peck of his purchases at half their cost, go to Florida, play the binder boys at Miami or the races at the Beach, with the same chance of profit in either case, and both on your money, come home and admit his inability to pay your bill and he hasn't done a thing for which he need ever gaze through the bars from the inside looking out. You can sue him and if certain highly technical requirements are met, like the combinations in an accident policy, you may petition him into bankruptcy and a few weeks later unsuccessfully oppose his discharge and see him embark in business again. Will you sell him? *You* may not, but your ninety-nine little brothers in business will go back for the hair of the dog that bit them and it's even money that in six months they will be frothing at the mouth and running around like mad.

The Remedy

Is it really as bad as this and is there no remedy? It is every bit as bad as this but there is a remedy. The only place to cut off this dog's tail is right behind his ears. Stop his channels of supply. Don't sell him. Be a little less concerned with volume and a little more with results. Spend a little money on your credit department. Get a credit man in whom you can have confidence, pay him a little more than you think he is worth, put him on a par with the sales manager in influence and prestige and then respect his opinions. In judging credits, consider the background of the risk. If the agency reports contain meager or unsatisfactory antecedent information, ask for more and better until you are satisfied with the completeness of the record. But suppose the new customer gets impatient and threatens to cancel unless you ship at once? Little old Sales Volume cropping up again. When you started in business, could you walk into a strange jobbing house and walk out again with their stock-in-trade under your arm? On your life, you could not! You built up your credit as slowly and painfully as you built up your sales. In business today there is a little too much of ship-by-first-express-will-remit-by-last-freight-if-any orders and not enough courage to ask, "Who are you and why?"

Capacity Hazard

Another business hazard from the credit viewpoint is the capacity hazerd. As we have seen, incompetence accounted for 36.9 per cent in number of 1925 failures. This would seem to afford reasonable proof of the oft repeated assertion that too many people who ought to be working for someone else start in business for themselves. Banks, mercantile houses and other credit grantors assume a serious responsibility in extending a credit to those incompetent to use it. It is no great kindness by this means to lead

a man into a morass from which he cannot extricate himself, when a little firmness, a little cold blooded judgment at the start might have saved his own investment and his creditors' losses.

How may ability be judged? By results, if the business has been long enough established to season. Comparative balance sheets and operating details over a series of years show the trend. There are many sources of information on average operating statistics in various lines of industry, but if you sell principally one class of trade you doubtless know what should be the margin of profit, the sales volume, the merchandise-receivables-capital-turnovers, the plant productivity and statement proportions.

Significance of Different Ratios

The Robert Morris Associates, a national organization of bank credit men have been studying for several years the significance of different rations in balance sheets and the relation of the several items in financial statements to each other and have been building up typical balance sheets and average ratios for many different lines and types of business. They measure ability as collectors by the ratio of sales to receivables, that is, the receivable turn-over; as merchandisers, by the ratio of sales to inventory, the merchandise turn-over and of sales to net worth, the capital turn-over; as manufacturers by the ratio of sales to fixed assets, plant productivity; as financiers, by the ratio of quick assets to current liabilities, the current ratio, of worth to debt, the owners' equity of net worth to fixed assets, the plant investments. Operating results are, of course, judged by percentage of earnings on sales and on net worth.

Capacity is not so readily established when the business is a new one. About the most the credit analyst can do is to run out the history, the background of the individuals who comprise the management. The opportunity to interview the risk personally is an advantage. This brings character analysis into play and the very difficulty of the task adds to its zest.

It is natural that the capital hazard in America should be great. Lack of capital was responsible for one-third of 1925's failures. The hardest lesson for the American business man to learn is that there is a distinct relation between sales volume and capital which vary, tho it may between different industries, is reasonably constant within each industry.

How is lack of capital best detected? Many of the ratios discussed under the capacity hazard can be used to measure the capital risk. One of the best is the ratio of net worth to total debt. As a general principle, the owner should have more at risk than his creditors, and therefore his capital should exceed his liabilities. The current ratio is a good barometer. It invariably falls when the danger of insufficient capital threatens. The diagnosis may be confirmed by other ratios. A business lacking capital usually depends on sales velocity and all of the turnovers are high as is the plant investment.

There are means of reducing the capital hazard, but they are rarely popular with the business men to whom they are suggested. He may remain in the employ of others until he accumulates sufficient capital from his earnings, but this does not satisfy his ambition or still his impatience. Possibly a partner who will contribute capital is the solution. But this means a division of profits which he dislikes. The only other remedy is a fixed determination to keep the relation of sales to net worth down to the point which the experience of the industry has proven to be safe and to rely on accumulated earnings to finance increased sales. The painful slowness in working out this method makes its general adoption doubtful.

The remedy usually sought is bank loans. This is not a cure but an opiate. It may deaden growing pains for a while, but they redouble intensity when the bank seeks repayment, always, at the most inopportune time.

The external hazard is our final consideration. Included in this we have "failure of others" and "competition". It is a debatable question to what extent these are properly attributable to the capacity hazard. The important cause under this classification, however, is that called by Bradstreet's "specific conditions;" that is, floods, fires, crop disasters, trade depressions. Failures of 14.8 per cent out of the group total of 18.1 per cent are assigned to this reason. The title lacks descriptive value and it might be more accurate to designate this cause as "cyclical conditions;" that is, failures attributed to the changing conditions of the business cycles. A host of prophets have sprung up who with charts and graphs dogmatically predict the course of business. Accurately, if not formally described, much of this is "bunk." But it has been more or less definitely established that business moves through succeeding periods of depression, recovery, inflation and liquidation and that the basic reasons for the changes are characteristic of human nature, thrift, industry, ambition, speculation buoyancy, distrust. The item and duration of the various swings cannot be accurately foretold. They may be hastened or retarded by catastrophes, destruction of fixed capital crop conditions, political factors or radical inventions.

Obviously, a new business starting in when the trend is upward, when purchasing power is increasing, and being more widely distributed, when prices are rising and people are confident and hopeful is moving with the natural forces and has a better opportunity for success than one beginning toward the end of the period of inflation when these forces will combat instead of aid it.

Competent credit men devote quite as much time to conditions affecting this hazard as to any other. The broad policies of their houses are based on their conclusions. Is it a time to expand credit, lengthen terms, increase inventories and volume or should curtailment be the order of the day in all departments? The correct answer to this momentous question arising so frequently calls for all that a man can command of study, thought, analysis, and judgment. There is no more serious business hazard from a credit viewpoint than this one of cyclical conditions and none yielding surer rewards for those who meet and overcome it.

Problems Many and Solutions Difficult

In what may seem to you a long time, but in what is, in reality, a limited period for the discussion of such a broad subject, we have considered from the credit viewpoint.

A—The moral hazard, fundamental of all credit granting.

B—The capacity hazard, test of the ability of the individual to so conduct his business as to deserve credit.

C—The capital hazard, the necessity of keeping volume and net worth in that relationship shown by experience to afford safety without sacrifice.

D—The external hazard, the effect of varying stages of the business cycle on broad questions of policy.

The problems are many. Their solution is difficult. Every hour of the business day brings a call on the reserve of experience and judgment and the accumulation sends a man home with energy and nerve force sapped to exhaustion. But the joy of struggle and achievement brings him back the next morning, running the last block, eager for the day's happenings, alive to its possibilities, keen for its insatiable demands. And the reward? It is not written in terms of dollars. In such a game, money is a counter, the chips by which are measured success and accomplishment the great compensations.

Waterford Art Papers Dissolved

[FROM OUR REGULAR CORRESPONDENT]

COHOES, N. Y., May 1, 1926.—The Waterford Art Papers, Inc., this week filed a notice of dissolution with the Secretary of State at Albany. The company was organized about three years ago and for a time operated a plant in Heartt avenue, this city. About a year ago the business of the Waterford Art Papers, Inc., was absorbed by the American Multitone Papers Corporation, newly organized with local capital. The plant was removed to the Ogden Mill, Ontario street, where it is now located. The company manufactures a special product under a patented process and the entire capacity of its plant for several years has been contracted for.

Obituary

Archibald P. Ramage

NORTHAMPTON, Mass., May 3, 1926.—Archibald P. Ramage, 56, treasurer and general manager of the Missisquoi Pulp and Paper Company, died at his home at 281 Elm street, here, Thursday morning of last week, after an invalidism of six months. Mr. Ramage was actively connected with the paper industry practically his entire life and achieved a reputation as a bristol board producer. His position in the trade was unique, as he not only manufactured, but had the keenest insight to its peculiar marketing conditions. He was of a lovable nature and had hosts of friends at home and abroad.

He came from a family long associated with the paper business. He was born in Penicuik, Scotland, and after serving an apprenticeship in the old established mills of Alexander Cowan &

ARCHIBALD P. RAMAGE

Sons, Ltd., he emigrated to America and entered the employment of the Holyoke Paper Company (now a division of the American Writing Paper Company) in 1890 and worked for a term of years as machine tender. Subsequently he was connected with the Chemical Paper Company, with George C. Gill during the Newton regime and, strange to relate, Mr. Gill was associated with Mr. Ramage during Mr. Ramage's late years.

Mr. Ramage later became connected with the James Ramage Paper Company at Monroe Bridge, in an official capacity, and remained there for some years. In 1922 he organized the Hampton Paper Company at Northampton, where he made a specialty of black album papers, photographic papers and colored specialties. This mill was destroyed by fire in 1915.

Due to his successful career he was selected to start the paper plant at Sheldon Springs, Vt., and in 1912 he organized the present paper mills of the Missisquoi Pulp and Paper Company. This was his largest achievement and he watched with keen interest its inception from a pulp mill to a paper mill producing 25 tons daily, until today, with its capacity of 50 tons, this development necessitated the building of an entire community and it was a great pleasure for him to plan this.

In 1896 Archibald Ramage married Adelaide C. Ramage, daughter of the late James Ramage. He is survived by Mrs. Ramage and two daughters, Christine, and Elizabeth at Smith College; also four brothers and two sisters. Two brothers, William and John, and a sister, Agnes, are in Scotland. His sister, Marella, is at Sheldon Springs, Vt. His brother, Oswald, at Lincoln, N. H., and his brother, Lawson, is general superintendent and vice-president of the Missisquoi Mills.

Mr. Ramage was a great lover of his home and enjoyed his family. His hobby was flowers of every description, but more especially roses. His beautiful gardens at Northampton were a paradise to him, to his family and to his friends.

Mr. Ramage was a Knights Templar, being a member of Lafayette Commandery No. 3 of St. Albans, Vt., and a Shriner in Mt. Sinai Temple of Montpelier, Vt. He was a member of the Canadian Club of New York, of the Northampton Golf Club and a trustee in the Unitarian church at Northampton.

The funeral was held Saturday at his Northampton home. Rev. Mr. Young of the Unitarian church will conduct the services. The body will be cremated.

Miami Valley Superintendents Meet

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, O., May 3, 1926.—The Miami Valley division of the American Pulp and Paper Mill Superintendents' Association met Saturday night April 24 in Community Center dining rooms at West Carrollton.

On this occasion the Miami Paper Company and other paper making, parchment and envelope manufacturers were the hosts. W. W. Sunderland, president of the Miami Paper Company, addressed the superintendents. Mr. Sunderland always has kept in close touch with the mechanical departments and his talk was of special interest to the men and the other manufacturers in attendance.

The speaker of the evening was Wayne S. Shantz who told of the art of printing and its relation to paper making. The printing trade has been recognized for many years as one of the most important in existence and the speaker gave facts showing its significant connection with the manufacture of paper, the age-old "measure of a people's culture."

Changes in Diem & Wing Paper Co.

CINCINNATI, Ohio, April 30, 1926.—The Diem & Wing Paper Company announce a change in organization effective May 1, 1926. Albert Diem, whose father the late F. J. Diem was one of the founders of the company nearly a half century ago, will be the head of the managerial department. This department will have charge of the manufacture of the various products of the company and be in complete control of the offices and employees. Mr. Diem has had many years experience in the paper business and was formerly president of the company.

Paul A. Stuhlreyer, secretary of the company, will be the purchasing agent. Mr. Stuhlreyer's knowledge of both fine and coarse papers makes him an ideal man for the position.

The position of general sales manager is filled by Arthur L. Brown, who enjoys a wide circle of acquaintanceship not only in the paper industry but in many other fields.

As in the past, William F. Roemler will be head of the department of audits and credits. Mr. Roemler was one of the original incorporators of the concern, and has been associated with it for many years.

A. P. W. Paper Co. Starts Work on New Mill

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., May 3, 1926.—The A. P. W. Paper Company has started construction work on a new mill at Broadway and Colonie streets, North Albany. The company was recently granted a permit for the erection of the new building and contractors are now excavating for the foundations. The mill will cost, according to estimates, $60,000 and will be operated as an addition to the company's extensive North Albany plant. It will be entirely fireproof and modern in every respect. The new mill will be of heavy mill construction and will conform in architecture to the other units of the A. P. W. plant. The erection of the new mill was decided upon after officials of the company had decided that increased production was necessary to keep pace with the growing demands for the firm's products.

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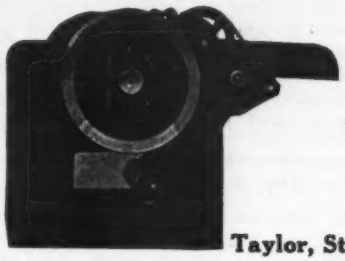
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Oils — Paper — Water — Microphotograph
Electrical, Mechanical, Physical, Chemical and Photometric Tests
ELECTRICAL TESTING LABORATORIES
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The Guide to the Pulp and Paper Industry

A NEW edition of the Lockwood Directory of the paper and allied trades is ready for delivery. It is the 1926—51st annual edition—is thoroughly revised and brought up to date.

The entire contents is classified under separate headings for the United States and Canada, alphabetically and geographically arranged by States. The price is $7.00 cash with the order which includes all delivery charges.

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NATIONAL WOOD UTILIZATION

(*Continued from page 25*)

steam might, under certain circumstances be used satisfactorily for the production of pulp and paper.

The sub-committee feels that this is in part a problem for the industry itself to solve and yet it could work advantageously with saw mills and wood using plants through the National Committee.

Prevention of Decay

IV. Prevention of the decay of timber and pulpwood.

The sub-committee feels that the question of waste through decay is a question which is common to all of the wood using industries. While unfavorable conditions for storage for pulpwood are known to be the cause of enormous losses, yet the difficulties now experienced in better storage and handling of wood makes the problem difficult of solution in the pulp and paper industry alone. In this question the Forest Products Laboratory at Madison has been doing excellent work but the results of their work could be made of greater value through wider application. The National Committee might well be of assistance both in furthering a study of the question and in the application of results in the industry.

Improvements in Technique

V. Improvements in manufacturing technique, particularly in the production of groundwood pulp.

There is waste through failure of machinery to refine wood to proper point. This failure often causes a loss of wood material estimated conservatively at 5 per cent of the wood supplied to the grinders.

In the case of sulphite pulp, although laboratory results show a yield of 55 per cent from spruce wood, in the majority of mills the yield is less than 45 per cent of the weight of the wood.

The sub-committee feels that while this is largely a question for the industry itself to meet, the National Committee might be of assistance in the coordination of research within the industry and through governmental agencies.

Re-use of Paper

VI. Re-use of Papers—Saving waste paper saves wood.

While there is a possibility that a higher price for wood and for waste paper is the only way by which more of the waste paper would be collected and used, nevertheless there is great opportunity for progressive effort to insure a continuous outlet for waste paper at a stable price.

The sub-committee feels that as this is a question in which the public is vitally concerned, the National Committee might assist materially in educating both the public and the industry as to benefit of saving wood through saving waste paper.

Saving of Wood

VII. Saving of wood through increased use of paper.

The increasing scarcity and cost of wood and increasing cost of transportation has brought into use fiber or container board and other products of pulp, direct and indirect. Any saving of wood through the use of fiber containers means the use of that wood for a product of higher value.

A recent study of the use of lumber for packing cases in the pulp and paper mills of New England showed the use of a surprising amount of spruce lumber in those mills which should be going into the mills in the form of pulpwood.

Any real and determined effort made for the saving of wood must be based upon recognition of economic factors involved. Therefore, the sub-committee feels that the National Committee could be of great assistance in harmonizing the interests of the producers of lumber and of fiber cases in such a way as to accomplish the most effective use of wood and therefore the saving of wood.

A. C. Bate New Secretary of Kalbfleisch Corp.

The Kalbfleisch Corporation have announced the election of Arthur C. Bate as Secretary. Mr. Bate has for some years been in intimate touch with the paper industry and during the last four years has been associated with the Kalbfleisch Corporation as sales manager of the Casein Department and Paper Chemicals Division. His many friends in the industry will be pleased at this news of his further advancement.

ARTHUR C. BATE

Fatal Accident at Iroquois Pulp Co. Mill

SCHUYLERVILLE, N. Y., May 3, 1926.—The plant of the Iroquois Pulp and Paper Company, at Thompson, was recently the scene of a serious accident which resulted in the death of the chief engineer. The accident occurred on Sunday while the paper mill was closed. James Casselberry, the engineer, and his assistant, Raymond Blair, were engaged in cleaning the flues in one of the large boilers when in some manner unexplained the two men were trapped by steam entering from a connected boiler. The men were badly burned by the live steam and after being rescued were rushed to the Saratoga hospital where Mr. Casselberry expired the following day. Mr. Blair while badly burned about the legs is recovering.

Mr. Casselberry was a native of Scranton, Pa., and had been employed by the Iroquois Pulp and Paper Company for eight years. A wife and two young daughters survive.

Fort Orange Paper Co. Repairs Fire Damage

[FROM OUR REGULAR CORRESPONDENT]

CASTLETON, N. Y., May 1, 1926.—The fire last week at the plant of the Fort Orange Paper Company caused damage which officials of the company estimate at $50,000. The blaze when discovered had already gained considerable headway and for a time assumed threatening proportions. Efficient work on the part of firefighters prevented a much greater loss. A large part of the estimated damage was to machinery and stock caused by water. The loss is covered by insurance.

Repairs were started immediately to the burned portion of the plant and the work of removing traces of the fire is well under way. Contractors in charge of this work have been instructed to rush these repairs. Work in the plant, which manufactures "Fopaco" paper containers, will not be seriously interfered with as a result of the fire.

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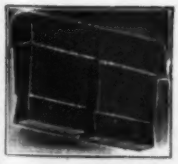

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NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 1, 1926

SUMMARY

Cigarette paper .....99 cs.
Wall paper .....18 bls., 3 cs.
Paper hangings .....41 bls., 4 cs.
News print .....968 rolls, 278 bls., 118 cs.
Printing paper .....388 bls., 205 cs.
Wrapping paper .....93 rolls, 61 bls., 15 cs.
Packing paper .....120 rolls, 20 cs.
Kraft paper .....135 rolls, 37 bls.
Tissue paper .....23 cs.
Writing paper .....45 cs.
Trunk paper .....3 cs.
Colored paper .....7 cs.
Cover paper .....7 cs.
Pergamyn paper .....35 cs.
Fancy paper .....6 cs.
Surface coated paper .....66 cs.
Baryta coated paper .....9 cs.
Gold coated paper .....6 cs.
Metal coated paper .....14 cs.
Decalcomania paper .....38 cs.
Drawing paper .....27 cs.
Filter paper .....10 bls., 32 cs.
Straw board .....1061 rolls
Miscellaneous paper 1250 rolls, 250 bls., 119 pgs., 185 cs.

CIGARETTE PAPER

Liggett & Myers Tobacco Co., Paris, Havre, 99 cs.

WALL PAPER

W. H. S. Lloyd & Co., Minnekahda, London, 13 bls.
F. J. Emmerich, Baltic, Liverpool, 2 cs.
F. J. Emmerich, Westphalia, Hamburg, 4 bls.
A. C. Dodman, Jr., Inc., Aquitania, Southampton, 1 bl., 1 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Baltic, Liverpool, 7 bls.
W. H. S. Lloyd & Co., Minnekahda, London, 4 cs., 34 bls.

NEWS PRINT

Parsons & Whittemore, Inc., Baltic, Hango, 442 rolls.
L. Schulman & Co., Baltic, Hango, 94 cs.
Maurice O'Meara Co., Baltic, Hango, 24 cs.
Maurice O'Meara Co., Minnequa, Hango, 143 rolls, 158 bls.
H. Reeve Angel & Co., Inc., Pr. Harding, Bremen, 383 rolls, 120 bls.

PRINTING PAPER

C. Steiner, Rotterdam, Rotterdam, 30 cs.
P. C. Zuhlke, Rotterdam, Rotterdam, 49 cs.
Maurice O'Meara Co., Berlin, Bremen, 27 cs.
Oxford University Press, Baltic, Liverpool, 6 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 36 cs.
W. Hartman & Co., Inc., Westphalia, Hamburg, 9 bls.
J. P. Heffernan Paper Co., Westphalia, Hamburg, 40 bls.
Perkins, Goodwin & Co., Westphalia, Hamburg, 14 cs.
Irving Bank-Columbia Trust Co., Arabic, Hamburg, 339 bls.
Titan Shipping Co., Aquitania, Southampton, 14 cs.
H. Reeve Angel & Co., Inc., Pr. Harding, Bremen, 29 cs.

WRAPPING PAPER

Coy, Disbrow & Co., Inc., Gripsholm, Gothenburg, 21 bls.
Foreign Paper Mills, Inc., Gripsholm, Gothenburg, 93 rolls.
Japan Paper Co., Gripsholm, Gothenburg, 12 bls.
Maurice O'Meara Co., Gripsholm, Gothenburg, 28 bls.
C. Steiner, Westphalia, Hamburg, 15 cs.

PACKING PAPER

Okonite Callender Cable Co., Amer. Banker, London, 120 rolls.
International Forwarding Co., Westphalia, Hamburg, 20 cs.

KRAFT PAPER

Arkell Safety Bag Co., Gripsholm, Gothenburg, 135 rolls, 37 bls.

TISSUE PAPER

Iwai & Co., Taketoyo Maru, Kobe, 4 cs.
S. Gilbert, Rotterdam, Rotterdam, 4 cs.
F. C. Strype, Caronia, Liverpool, 15 cs.

WRITING PAPER

F. J. Kramer & Co., Minnekahda, London, 20 cs.
Coenca, Morrisson & Co., Paris, Havre, 9 cs.
Japan Paper Co., Paris, Havre, 13 cs.
American Express Co., Paris, Havre, 3 cs.

TRUNK PAPER

P. H. Petry & Co., Westphalia, Hamburg, 3 cs.

COLORED PAPER

P. H. Petry & Co., Westphalia, Hamburg, 7 cs.

COVER PAPER

International Forwarding Co., Westphalia, Hamburg, 7 cs.

PERGAMYN PAPER

F. C. Strype, Westphalia, Hamburg, 35 cs.

FANCY PAPER

Whiting & Patterson Co., Aquitania, Southampton, 6 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Rotterdam, Rotterdam, 16 cs.
P. C. Zuhlke, Rotterdam, Rotterdam, 32 cs.
P. C. Zuhlke, Westphalia, Hamburg, 16 cs.
Whiting & Patterson Co., Westphalia, Hamburg, 2 cs.

BARYTA COATED PAPER

Globe Shipping Co., Berlin, Bremen, 9 cs.

GOLD COATED PAPER

C. B. Richard & Co., Berlin, Bremen, 5 cs.
C. B. Richard & Co., Pr. Harding, Bremen, 1 cs.

METAL COATED PAPER

Hensel, Bruckman & Lorbacher, Westphalia, Hamburg, 14 cs.

DECALCOMANIA PAPER

C. W. Sellers & Co., Berlin, Bremen, 11 cs.
L. A. Consmiller, Berlin, Bremen, 17 cs.
W. J. Byrnes & Co., Arabic, Hamburg, 9 cs.
Manhattan Decalcomania Co., Pr. Harding, Bremen, 1 cs.

DRAWING PAPER

Globe Shipping Co., Berlin, Bremen, 17 cs.
Devoe & Raynolds Co., Minnekahda, London, 4 cs.
E. Dietzgen & Co., Minnekahda, London, 5 cs.
H. Reeve Angel & Co., Inc., Minnekahda, London, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnekahda, London, 25 cs.
A. Giese & Son, Westphalia, Hamburg, 10 bls.
C. Schleicher Schull & Co., Westphalia, Hamburg, 5 cs.
Taiyo Trading Co., Havre Maru, Nagoya, 2 cs.

STRAW BOARD

A. Vuyk, Rotterdam, Rotterdam, 1061 rolls.

MISCELLANEOUS PAPER

Heemsoth, Basse & Co., Rotterdam, Rotterdam, 119 pgs.
Steiner Paper Corp., Rotterdam, Rotterdam, 129 cs.
Tamm & Co., Rotterdam, Rotterdam, 18 cs.
Maurice O'Meara Co., Gripsholm, Gothenburg, 12 rolls, 3 bls.
D. S. Walton & Co., Gripsholm, Gothenburg, 36 rolls.
The Borregaard Co., Inc., Gripsholm, Gothenburg, 947 rolls, 52 bls.
Japan Paper Co., Gripsholm, Gothenburg, 14 cs.
J. W. Banker, Gripsholm, Gothenburg, 49 bls.
M. M. Cohen, Gripsholm, Gothenburg, 240 rolls, 146 bls.
Arkell Safety Bag Co., Gripsholm, Gothenburg, 15 rolls.
E. H. Sergeant Co., Gripsholm, Gothenburg, 5 cs.
A. C. Dodman, Jr., Inc., Paris, Havre, 3 cs.
Guibout freres, Paris, Havre, 9 cs.
H. Reeve Angel & Co., Inc., Havre Maru, Yokohama, 4 cs.
Japan Paper Co., Aquitania, Southampton, 3 cs.

RAGS, BAGGINGS, ETC.

A. W. Fenton, Inc., Tractor, Hamburg, 72 bls. rags.
National Bank of Commerce, Tractor, Hamburg, 47 bls. rags.
National Bank of Commerce, Luxpalile, Leghorn, 219 bls. rags.
Mechanics & Metals Natl. Bank, Luxpalile, Leghorn, 224 bls. rags.
State Bank, Luxpalile, Leghorn, 115 bls. rags.
A. W. Fenton, Inc., Luxpalile, Leghorn, 134 bls. rags.
Atlas Waste Manfg. Co., Taketoyo Maru, Kobe, 7 bls. rags.
State Bank, Baltic, Liverpool, 35 bls. oagging.
E. Mayer, Galileo, Hull, 38 bls. rags.
Equitable Trust Co., Galileo, Hull, 34 bls. rags.
B. D. Kaplan, Caronia, Liverpool, 7 bls. rags.
Patterson National Bank, Minnekahda, London, 40 bls. rags.
S. Birkenstein & Sons, Westphalia, Hamburg, 68 bls. rags.
State Bank, Westphalia, Hamburg, 61 bls. rags.
Standard Products Corp., Westphalia, Hamburg, 42 bls. rags.
W. Steck & Co., Westphalia, Hamburg, 52 bls. rags.
Brown Bros. & Co., Westphalia, Hamburg, 97 bls. rags.
E. J. Keller Co., Inc., Westphalia, Hamburg, 43 bls. rags.
Salomon Bros. & Co., Westphalia, Hamburg, 45 bls. rags.
Bowery East River National Bank, Westphalia, Hamburg, 43 bls. rags.
Darmstadt, Scott & Courtney, Westphalia, Hamburg, 13 bls. bagging.
A. W. Fenton, Inc., Pipestone County, Havre, 153 bls. rags.
V. Galaup, Pipestone County, Havre, 280 bls. rags.
R. Godfrey, Pipestone County, Havre, 51 bls. rags.
Robert Blank, Pipestone County, Havre, 171 bls. rags.
Atterbury Bros., Inc., Pipestone County, Havre, 52 bls. rags.
J. M. Jaffe, Pipestone County, Havre, 17 bls. rags.
Castle & Overton, Inc., Pipestone County, Dunkirk, 177 bls. bagging.
L. H. Abenheimer, Salvore, Genoa, 22 bls. rags.
Royal Manig. Co., Salvore, Genoa, 10 bls. cotton waste.
A. W. Fenton, Inc., Salvore, Leghorn, 126 bls. rags.
A. W. Fenton, Inc., Salvore, Naples, 78 bls. rags.
Mechanics & Metals National Bank, Salvore, Naples, 298 bls. rags.
Robert Blank, C. Gilbert, Hamburg, 86 bls. rags.
Equitable Trust Co., Havre Maru, Kobe, 80 bls. rags.
M. Kanarek, Arabic, Hamburg, 18 bls. rags.
Equitable Trust Co., Arabic, Hamburg, 43 bls. rags.
W. Steck & Co., Arabic, Hamburg, 38 bls. rags.
Central National Bank, Indier, Antwerp, 43 bls. bagging.
P. Berlowitz, Indier, Antwerp, 179 bls. rags.
New York Trust Co., Galtymore, Leith, 68 bls. bagging.
Central National Bank, Galtymore, Dundee, 53 bls. rags.
M. Snedeker Corp., Galtymore, Belfast, 111 bls. rags.
A. W. Fenton, Inc., City of Eureka, Leghorn, 507 bls. rags.
Mechanics & Metals National Bank, City of Eureka, Leghorn, 32 bls. rags.
Mechanics & Metals National Bank, City of Eureka, Leghorn, 47 bls. bagging.
National City Bank, City of Eureka, Leghorn, 90 bls. rags.
Irving Bank-Columbia Trust Co., Kerhonkson, Manchester, 145 bls. paper stock.
Brown Bros. & Co., Minnequa, Hango, 209 bls. rags.
National Bank of Commerce, Pr. Harding, Bremen, 69 bls. rags.
Whaling Waste Products Co., Pr. Harding, Bremen, 4 bls. rags, 69 bls. card waste.
Chemical National Bank, Pr. Harding, Bremen, 39 bls. rags.
Chase National Bank, Pr. Harding, Bremen, 33 bls. rags.
A. W. Fenton, Inc., Pr. Harding, Bremen, 275 bls. rags.
Robert Blank, Pr. Harding, Bremen, 264 bls. rags.
Anglo-South American Trust Co., Pr. Harding, Bremen, 111 bls. card waste.
E. J. Keller Co., Inc., Pr. Harding, Bremen, 53 bls. rags.
A. H. Searle, Pr. Harding, Bremen, 8 bls. rags.

OLD ROPE

Brown Bros. & Co., Boston City, Bristol, 218 coils.
Brown Bros. & Co., Galileo, Hull, 214 coils.
E. J. Keller Co., Inc., Galileo, Newcastle, 107 coils.
E. J. Keller Co., Inc., Galtymore, Leith, 86 coils.
E. J. Keller Co., Inc., Berlin, Bremen, 114 coils.
Brown Bros. & Co., Stavangerfjord, Oslo, 41 coils.

MANILA ROPE

Brown Bros. & Co., Rotterdam, Rotterdam, 117 pgs.

SUNN ROPE

DeGrauw, Aymer & Co., Indier, Antwerp, 110 coils.

WOOD PULP

Equitable Trust Co., Tractor, Hamburg, 136 bls. wood pulp, 25 tons.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 748 bls. dry soda pulp.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 256 bls. sulphite pulp.
Johanson, Wales & Sparre, Inc., Gripsholm, Gothenburg, 245 bls. sulphite pulp.
Price & Pierce, Ltd., Gripsholm, Gothenburg, 1920 bls. wet pulp.
Nilsen, Lyon & Co., Inc., Berlin, Bremen, 784 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Berlin, Bremen, 1250 bls. sulphate pulp.
Pagel, Horton & Co., Inc., Carlsholm, Stockholm, 2000 b.s. sulphite pulp.
J. Anderson & Co., C. Gilbert, Hamburg, 275 bls. wood pulp, 55 tons.
Chemical National Bank, Stavangerfjord, Oslo, 900 bls. sulphite pulp.
Perkins, Goodwin & Co., Stavangerfjord, Oslo, 250 bls. sulphite pulp.
Buck, Kiaer & Co., Inc., Stavangerfjord, Hommelvik, 2044 bls. sulphite pulp.
Buck, Kiaer & Co., Inc., Stavangerfjord, Oslo, 1200 bls. sulphite pulp.
H. Hollesen, Inc., Pr. Harding, Bremen, 2750 bls. sulphite pulp, 550 tons.
Johanson, Wales & Sparre, Inc., Pr. Harding, Bremen, 1250 bls. wood pulp, 254 tons.

WOOD PULP BOARDS

Lagerloef Trading Co., Minnequa, Hango, 433 bls., 61 tons.

WOOD FLOUR

The Burnet Co., Gripsholm, Gothenburg, 44 bags.
Composition Materials Co., Baltic, Hango, 400 bags.
B. L. Soberski, Stavangerfjord, Frederickstad, 1050 bags.

CASEIN

Atterbury Bros., Inc., Bakersfield, Buenos Aires, 250 bags, 33,075 lbs.
National City Bank, Bakersfield, Buenos Aires, 334 bags, 50,040 kilos.
Casein Manfg. Co., Bakersfield, Buenos Aires, 417 bags, 55,144 lbs.
Kalbfleisch Corp., Western World, Buenos Aires, 1501 bags.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 1, 1926

A. W. Fenton, Inc., Lixpalile, Leghorn, 71 bls. rags.
D. I. Murphy, Lixpalile, Leghorn, 190 bls. rags.
Castle & Overton, Inc., Lixpalile, Leghorn, 171 bls. rags.
New York Trust Co., Quaker City, Leith, 101 coils old rope.
Brown Bros. & Co., Norfolk Maru, Port Said, 53 bls. rags.
J. A. Steer & Co., Boston City, Bristol, 70 bls. rags.
A. Murphy & Co., London Mariner, London, 6 cs. writing paper.
J. B. Moore & Co., London Mariner, London, 148 bls. rags.
Castle & Overton, Inc., Pipestone County, Havre, 360 bls. rags.
Robert Blank, Pipestone County, Havre, 812 bls. rags.
The Stone Bros. Co., Inc., Pipestone County, Havre, 111 coils old rope.
J. M. Jaffe, Pipestone County, Havre, 65 bls. rags.
J. M. Hagy Waste Works, Pipestone County, Dunkirk, 100 bls. rags.
E. Butterworth & Co., Inc., Pipestone County, Dunkirk, 125 bls. flax waste.
Castle & Overton, Inc., Pipestone County, Dunkirk, 57 bls. rags.
E. H. Bailey & Co., Galtymore, Leith, 129 cs. paper.
A. W. Fenton, Inc., Galtymore, Leith, 93 bls. rags.
Robert Blank, Eastern Dawn, Rotterdam, 637 bls. rags.
Robert Blank, Montpelier, Hamburg, 234 bls. rags.
Robert Blank, Montpelier, Sweden, 206 bls. rags.
Robert Blank, Manchester Citizen, Manchester, 91 bls. paper.
Buck, Kiaer & Co., Inc., Kentucky, Oslo, 800 bls. kraft pulp.
Buck, Kiaer & Co., Inc., Kentucky, Oslo, 400 bls. sulphite pulp.
Castle & Overton, Inc., Montpelier, Hamburg, 125 bls. rags.
Castle & Overton, Inc., Bellepline, Belgium, 156 bls. rags.
Castle & Overton, Inc., Gottingen, Germany, 49 bls. rags.
Castle & Overton, Inc., Anaconda, Rotterdam, 132 bls. wood pulp, 26 tons.
H. Hollesen, Inc., C. Gilbert, Hamburg, 250 bls. wood pulp, 52 tons.
Brown Bros. & Co., C. Gilbert, Hamburg, 108 bls. rags.
Castle & Overton, Inc., C. Gilbert, Hamburg, 111 bls. rags.
D. I. Murphy, C. Gilbert, Hamburg, 61 bls. rags.
Perkins, Goodwin & Co., C. Gilbert, Hamburg, 223 cs. paper.
E. J. Keller Co., Inc., Hektor, Barcelona, 146 bls. rags.
E. J. Keller Co., Inc., Hektor, Marseilles, 215 bls. bagging.
E. J. Keller Co., Inc., Alaska, Havre, 390 bls. rags.
E. J. Keller Co., Inc., Nessian, Amsterdam, 111 bls. rags.
E. J. Keller Co., Inc., Montpelier, Hamburg, 652 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING MAY 1, 1926

Bulkley, Dunton & Co., Sac City, ———, 750 bls. wood pulp.
Bulkley, Dunton & Co., Holstein, ———, 660 bls. wood pulp.
E. J. Keller Co., Inc., Bilderdyk, Karlsruhe, 375 bls. wood pulp.

PORTLAND IMPORTS

WEEK ENDING MAY 1, 1926

The Borregaard Co., Inc., Carlsholm, Gothenburg, 1700 bls. dry pulp.
Waterfalls Paper Mills, Carlsholm, Gothenburg, 1061 bls. sulphite pulp.

NEW ORLEANS IMPORTS

WEEK ENDING MAY 1, 1926

Castle & Overton, Inc., Missouri, France, 128 bls. rags.

BOSTON IMPORTS

WEEK ENDING MAY 1, 1926

Atterbury Bros., Inc., Bakersfield, Buenos Aires, 918 bags casein, 121,451 lbs.
1st Natl. Bank of Boston, Bakersfield, Buenos Aires, 1251 bags casein, 75,060 kilos.
G. M. Graves Co., Inc., Quaker City, Leith, 41 bls. bagging.
Scandinavian Pulp Agency, Inc., Carlsholm, Gothenburg, 6096 bls. kraft pulp.
The Borregaard Co., Inc., Carlsholm, Gothenburg, 1875 bls. dry pulp.
Johanson, Wales & Sparre, Inc., Carlsholm, Gothenburg, 1196 bls. dry soda pulp.
Perkins, Goodwin & Co., Carlsholm, Gothenburg, 6792 bls. sulphate pulp.
Nashua Gummed & Coated Paper Co., Carlsholm, Gothenburg, 186 rolls wrapping paper.
1st Natl. Bank of Boston, Barbadian, London, 1300 bags casein.
Brown Bros. & Co., Barbadian, London, 319 coils old rope.
T. D. Downing & Co., Barbadian, London, 120 bls. rags.
Lagerloef Trading Co., Minnequa, Hango, 487 bls. wood pulp boards, 72 tons.
Lagerloef Trading Co., Minnequa, Hango, 22 rolls wood pulp boards, 22 tons.
Robert Blank, Blydendyk, Rotterdam, 150 bls. rags.
H. Hollesen, Inc., West Harcuvar, Hamburg, 390 bls. sulphite pulp, 78 tons.
E. J. Keller Co., Inc., Sacandaga, Antwerp, 94 bls. bagging.
E. J. Keller Co., Inc., Blydendyk, Rotterdam, 39 bls. rags.
Bulkley, Dunton & Co., Sac City, ———, 525 bls. wood pulp.
Bulkley, Dunton & Co., West Campgaw, ———, 850 bls. wood pulp.
Bulkley, Dunton & Co., Westerner, ———, 280 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING MAY 1, 1926

Lagerloef Trading Co., Minnequa, Hango, 1958 rolls wood pulp boards, 328 tons.
Mechanics & Metals Natl. Bank, Kerhonkson, Manchester, 280 b.s. bagging.

Seymour Paper Co. Buys Old Beach Plant

[FROM OUR REGULAR CORRESPONDENT]

SEYMOUR, Conn., May 1, 1926.—The Seymour Paper Company has purchased the old Beach Mill from the Paper Products Manufacturing Company, of Swarthmore, Pa., of which three of their directors are stock holders. The property includes the old S. Y. Beach Paper Company, on Beach street, which concern has been making paper in the town of Seymour for over half a century, and also includes the adjoining land, the pond and all paper machinery, located on said premises.

The deal when completed will involve about $75,000, after all of the new machinery has been installed, for the old machinery has been torn out and is being replaced by new machinery and new motors have been installed.

The mill, water rights and other privileges, have been given to the new owners. The certificate of the Seymour Paper Company was filed in the town clerk's office February 25 of this year, and the incorporaters are as follows: Albert T. Tong, of Seymour; Frank I. Peterson, of Ruck Run, Penn.; W. S. Sprague, of Swarthmore, Pa., C. A. Ernest, of Ridley Park, Pa., and R. E. Jefferies, of Moore, Pa.

The company manufactures, purchases and disposes of any and all kinds of paper, paper goods, boxes, labels, specialties, novelties and articles made from paper, wood pulp or any other fiber.

The amount of the capital stock of the corporation is $50,000, divided into 500 shares at part value of $100 each. The amount of the capital stock with which this corporation commenced business, was $30,000.

Champion Coated Paper Co. Stock Issue Approved

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, O., May 3, 1926.—Stockholders of the Champion Coated Paper Company, Hamilton, held a special meeting at the office in Hamilton on April 22 to approve the issue of 8,000 more shares of common stock of $100 par value, to take over a balance of common stock of the Champion Fibre Company.

It is understood that this plan completes the merger recently effected by the two concerns. The fibre plant is located in Canton, N. C.

Extensive improvements in paper mill machinery equipment have been made at the Miami Valley plant. The Black & Clawson Company, manufacturer of paper machines, closed a contract recently with the Champion for improvements of an important orders and the outlook for the future appears to be good.

The Hamilton plant has been operated with a full grist of character.

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, May 5, 1926.

During the past week, a fairly satisfactory volume of business was transacted in the local paper market. The demand for the various grades is reported to be about normal for the time of the year. Prices are holding up very well and apparently there have been very few cases of shading recorded. Sales organizations of the leading paper houses are optimistic and conditions generally are decidedly promising.

News print continues quite active and the increased production this year is being absorbed in a gratifying manner. Stocks on hand are below normal and the spot market is very firm. Publishers have been taking full advantage of the new contract prices which came into effect at the beginning of the year and many consumers are stocked well ahead.

Demand for the various grades of paper board is improving and the market is gradually becoming steadier. The position of the fine paper industry is sound. Tissues are displaying considerable strength. The tone of the coarse paper market is steady, while wrapping paper is still in good request.

Mechanical Pulp

The ground wood market has been rather quiet of late. Production is increasing steadily and stocks are beginning to accumulate. Shipments on contract are proceeding at a satisfactory pace. Offerings in the spot market are slightly more generous and prices are somewhat easier. Imported ground wood, No. 1, moist, is now selling at from $36 to $38 a ton, ex dock, and dry at from $37 to $40 a ton.

Chemical Pulp

No further developments have transpired in the chemical pulp market. Consumers are still playing a waiting game in the expectation of large shipments of pulp when navigation opens on the Baltic. In the absence of more severe weather, shipments will probably be leaving Sweden shortly and the market may be expected to become more lively in the near future.

Old Rope and Bagging

While domestic old rope has been fairly active the demand for foreign old rope has been light. Mixed strings are also rather quiet at the present time. Bagging sales were mostly confined to small quantities, although there are a good volume of inquiries in the market. Prices are inclined to fluctuate slightly.

Rags

The various grades of rags are in fair request. Prices are somewhat easier on the whole. Some observers of the situation predict a more active market, and a general expansion of the industry, in the near future. While roofing rags are still easy, the number of inquiries in the market denotes a substantial gain in sales volume within the next few weeks.

Waste Paper

Mill demand for waste paper is still below normal, and it is reported that some packing plants have had to close down. Prices of some of the grades have registered further declines. Soft white shavings No. 1 are now quoted at from 2.85 to 3.00 cents a pound. No. 1 white news is selling at from 1.55 to 1.65 cents a pound, and No. 1 mixed paper at from .40 to .50 cents a pound.

Twine

Some radical changes have taken place in the twine market recently, and prices have declined sharply. However, it is considered by competent authorities in the industry that the decline is ill-timed, and unwarranted by basic conditions, and that some upward revision in quotations is bound to take place before long.

Duplex Kraft Best for Overseas Wrapping

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 5, 1926.—A type of paper known as duplex asphalted kraft has been found best to meet the severe requirement of adequately protecting goods during overseas shipments, according to the Commerce Department's Bureau of Standards.

This particular type of paper consists of two sheets of strong kraft wrapping paper, cemented together with a layer of asphaltum as the water-proofing medium. Such paper has sufficient strength to withstand the many sudden shocks and strains incident to overseas transportation and is water-resistant to an almost unbelievable extent.

Soon after the investigation to ascertain the most desirable type of such paper was started by the Standards Bureau it developed that the method of test commonly employed for determining the water resistance of wrapping paper was entirely inadequate and very misleading. This method consists in placing the sample under a water column and noting evidence of moisture passing through the paper by observation of its under surface which is exposed to the air. Papers having comparatively slight water resistance such as rosinsized kraft wrapping papers withstand this test indefinitely for the reason that the moisture evaporates as fast as it is transmitted through the paper, without forming drops or other visible evidence of its presence. After considerable research it was finally found that transmitted moisture could be trapped and made visible by means of a ground glass surface. When a box made of the paper under test is filled with water and set on the glass, any moisture passing through the paper is held by the many interstices of the ground surface and is visible upon lifting the box. A piece of black paper placed under the ground glass makes the trapped moisture more easily visible. Duplex asphalted kraft paper showing no transmission of moisture by this method within 24 hours is recommended for lining cases intended for overseas shipment.

This investigation is fully described in Technologic Paper No. 312 of the Bureau of Standards. Those interested can obtain copies from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5½c a piece.

C. J. Baby Succeeded by E. S. Noble as Manager

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., May 3, 1926.—C. J. Baby, who has occupied the position of assistant general manager of the Spruce Falls Company, Limited, at Kapuskasing, Ont., for the past three years, announces that he has retired from the company. Mr. Baby was succeeded by E. S. Noble, of the Northern Canada Power Company in Timmins, who has assumed his new duties as local manager.

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Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, May 5, 1926.

Trading in the local chemical market during the past week continued fairly active. A moderate volume of inquiries are being received for future business. Contract withdrawals are proceeding at a normal pace, and many manufacturers express satisfaction with the trend of affairs. Prices remain reasonably steady, although slight concessions are said to have been made in several quarters on desirable orders.

BLANC FIXE.—The blanc fixe market is firmer, due to the reported scarcity of this material for prompt shipment, and prices have advanced. The pulp is now selling at $56 per ton, in bulk, and the powder is quoted at from 4 to 4½ cents a pound in barrels, at works.

BLEACHING POWDER.—Steadiness prevails in the bleaching powder market. The demand is persistent, and shipments from the works have been heavy. Stocks on hand are said to be small at present. Bleaching powder is still quoted at from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity.

CAUSTIC SODA.—Demand for caustic soda is being well maintained and competition for business is very keen. Production is proceeding on a large scale and supplies are moving into comsumption in good volume. Quotations on caustic soda range from $3.10 to $3.15 per 100 pounds, at works. Spot car lots are quoted at from $3.20 to $3.25 per 100 pounds.

CASEIN.—Offerings of casein at the present time are rather limited and the market is more or less nominal. Supplies are expected to become more plentiful in the near future, however, when trading should become more active. Imported casein is still quoted at 17 cents a pound, in bags, and domestic casein at from 16½ to 17 cents a pound, in bags.

CHINA CLAY.—Both imported and domestic china clay are in fairly good request. Consumers are said to be taking stocks on regular contracts in satisfactory volume. Imported china clay is selling at from $13 to $22 a ton, in bulk, ship side, while domestic washed clay is still quoted at from $8 to $9 a ton, at mine, and pulverized at $10 a ton.

CHLORINE.—The tone of the chlorine market is steady, and shipments against contracts are proceeding on a broad scale. Demand for chlorine is being well maintained and prices are holding up very well. The quotation on chlorine is still 4 cents a pound, in tanks or multi-unit cars, at works, on contracts. The spot quotation ranges from 4½ to 4¾ cents a pound.

ROSIN.—Offers of rosin are somewhat more liberal and prices are slightly easier. Buyers are apparently not disposed to take on very large quantities at the present time. At the naval stores, the grades of rosin mostly used in the paper mills are now being quoted at from $10.50 to $12.20 per 280 pounds, ship side, in barrels.

SALT CAKE.—Demand for salt cake continues along satisfactory lines. Shipments against contract are proceeding in good volume. The spot market is also active and prices are generally holding up to former levels. Salt cake is still being quoted at from $17 to $20 a ton, in bulk, at works.

SODA ASH.—The soda ash market continues to exhibit a strong tendency. Contract withdrawals show no decline, and shipments are well up to the average for this period of the year. Production is being maintained at a steady rate, although stocks on hand are said to be below normal. Contract quotations, in car lots, at works, per 100 pounds, range as follows: in bulk, $1.25; in bags, $1.38; and in barrels, $1.63.

STARCH.—The starch market continues along routine lines and no changes have occurred in prices. Production has been excellent of late, and accumulations are sufficient to take care of all immediate business. Special paper maker's starch is still quoted at $3.32 per 100 pounds, in bags, and at $3.49 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Very little change has transpired in the sulphate of alumina market. Shipments against contract have been proceeding in usual volume, but the spot market has been limited to minor transactions. No changes have been reported in prices. Sulphate of alumina is quoted at from $2 to $2.05 per 100 pounds, for the iron free, in bags, at works, and at from $1.40 to $1.45 for the commercial grades.

SULPHUR.—A firm tone continues to be experienced in the sulphur market. Contract withdrawals are moving in satisfactory volume. Prices are well maintained at the previously quoted basis. The quotation on the grades of sulphur used in the paper mill ranges from $14 to $15 a ton, in bulk, at mine, and at from $20 to $21 a ton, ship side.

TALC.—The talc market is practically unchanged. Contract withdrawals are normal and prices are generally steady. American talc is still selling at from $16 to $18 a ton, at mine. French talc is quoted at from $18 to $22 a ton.

News of the California Trade

LOS ANGELES, Cal., May 3, 1926.— Paper jobbers in Los Angeles are fairly well satisfied with present conditions and with the prospects for the immediate future. The demand, while not up to what it used to be at this season of the year, is better now than it was a month ago and there are no present indications of a slump for some time to come.

Credits are being given conservatively and there appear to be no serious complaints about collections.

The event of importance during the coming month, as far as the Pacific Coast is concerned, is the annual convention of the Pacific States Paper Trade Association, which will be held at the Hotel Del Monte, during the week of May 10-15.

Tuesday and Wednesday of that week will be devoted to a golf tournament which is being given by the paper manufacturers for the paper jobbers. The tournament will be pulled on the beautiful links of the Hotel Del Monte and it is expected that all of the crack players in the paper trade will participate.

The business sessions of the convention will open on Thursday, May 13, and will continue through the balance of the week. Inasmuch as it never has been the custom for the association to issue anything like a formal program in advance of its convention, what subjects will receive the major attention of the deliberations is subject to conjecture at this time. However, no serious crisis threatens the trade at this time so it may be concluded that the sessions this year will be devoted to subjects which have a purely current and normal interest to the industry.

The R. and C. Paper Excelsior Company just has completed equipping a plant on Gladys avenue, Los Angeles, and is seeking an outlet for its product throughout Southern California. The company says its product is ideal for packing both heavy and fragile articles and is anticipating an active demand.

F. O. Butler, of the Butler Paper Corporation of Chicago, made a combined business and pleasure trip to the Pacific Coast recently.

Charles B. Pritchard, who for a number of years has held an executive position with the Paper Supply Company, of Los Angeles, sold his interest in the company recently and at present is enjoying a vacation. Mr. Pritchard has not announced what his future plans are as yet, but as he is too young and too active a man to think of retiring, it is suspected that he soon will be back in the harness. His friends in the paper industry hope that he may find a congenial place in the paper trade.

The California Woodenware Company recently has joined the Los Angeles Paper Trade Association.

Spalding Paper Co. to Elect Officers

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., April 29, 1926—The stockholders of the Spalding Pulp and Paper Company, recently organized in Newburg, Ore., will hold a meeting early in May for the selection of a board of directors and election of officers. A prospectus of the company is being prepared, and stock is still being bought, more than 150 persons having already voluntarily subscribed. At the May meeting a manager will be hired to manage the campaign.